THIRD FIVE-YEAR REVIEW REPORT FOR SAUGET AREA 2 SUPERFUND SITE ST. CLAIR COUNTY, ILLINOIS

Prepared by

U.S. Environmental Protection Agency
Region 5
Chicago, IL

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Signed by: THOMAS SHORT

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LIST OF ABBREVIATIONS & ACRONYMS

ABRTF	American Bottoms Regional Wastewater Treatment Facility
AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DNAPL	Dense Non-aqueous Phase Liquid
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
GMCS	Groundwater Migration and Control System
HDPE	High-density Polyethylene
IAWC	Illinois American Water Company
ICs	Institutional Controls
Illinois EPA	Illinois Environmental Protection Agency
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PAH	Polyaromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCP	Pentachlorophenol
PDA	Plume Discharge Area
ppm	Parts Per Million
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
RAO	Remedial Action Objectives
ROD	Record of Decision
RPM	Remedial Project Manager
Site	Sauget Area 2 Superfund Site
SVOC	Semi-volatile Organic Compound
UU/UE	Unlimited Use/ Unrestricted Exposure
VOC	Volatile Organic Compound

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, 42 U.S.C. Section 9621, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the third FYR for the Sauget Area 2 Superfund Site (Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR has been prepared because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Sauget Area 2 Site has been divided into two Operable Units (OUs). OU1 relates to the soils, sediments, surface water, and groundwater source contamination within the Site's boundaries. EPA selected the remedy for OU1 in a ROD issued in December 2013. The OU1 remedy is currently in the remedial design work planning phase; therefore, implementation of the remedial action for OU1 has yet to occur. OU2 addresses groundwater, for which an interim remedy was selected in a September 2002 ROD. That interim ROD for OU2 addresses the release of contaminated groundwater to the Mississippi River in the vicinity of Site R and the associated risks. Area-wide groundwater contamination resulting from the contaminated soil, sediments, surface water, and groundwater contamination source areas present in the Sauget Area 1 and 2 Sites will be addressed in the future as a separate remedial action. That remedial action will be selected in a separate and subsequent ROD for groundwater contamination in Sauget Areas 1 and 2, after the remedies set forth in the source area RODs for Areas 1 and 2 are implemented. As stated above, the remedial action for OU1 has not been implemented; therefore, the purpose of this FYR is to determine if the interim remedy, selected by EPA in its 2002 ROD for OU2, is protective of human health and the environment.

The Sauget Area 2 Superfund Site FYR was led by the EPA Project Manager, Stephanie Linebaugh. Participants included the Illinois Environmental Protection Agency (Illinois EPA) Project Manager, Paul Lake; the Potentially Responsible Party (PRP) Group representatives, Steve Smith and Bill Johnson (Eastman); and PRP Group consultant, Nathan McNurlen (AECOM). Illinois EPA and the PRP Group were notified of the initiation of the FYR on January 31, 2018. Illinois EPA, as the support agency representing the State of Illinois, has reviewed all supporting documentation and provided input to EPA during the FYR process.

Site Background

The Site is located in an area historically used for heavy industry, including chemical manufacturing, metal refining, power generation and waste disposal. As a whole, the Sauget Area 2 Site consists of five inactive disposal areas which are referred to as Sites O, P, Q, R and S. Three of the sites are closed landfills (Sites P, Q and R); one consists of four closed sludge lagoons (Site O); and one is a waste disposal site associated with an abandoned solvent reclamation facility (Site S).

Heavy industry has been present on the east bank of the Mississippi River between Cahokia and Alton, Illinois, for nearly a century. Industrial activity in the area peaked in the 1960s. Although many industrial facilities have closed down throughout the American Bottoms floodplain, Sauget Area 2 and the surrounding area is still highly industrialized. Currently, the area is used for industry, warehousing, bulk storage, wastewater treatment, hazardous waste treatment, waste recycling, and truck terminals. In addition to heavy industry, the area also has commercial facilities, bars, nightclubs, convenience stores, and restaurants. A number of petroleum, petroleum product, and natural gas pipelines are located in the area.

No residential land use is located immediately adjacent to or downgradient of Sites O, P, Q, R, or S. Residential areas of Sauget and East St. Louis are separated from the Sauget Area 2 Site by other industries or by undeveloped tracts of land. Limited residential areas exist approximately 3,000 feet to the northeast and southeast of the Site's boundaries. According to the 2010 census, the population of the Village of Sauget, which is where the majority of the Sauget Area 2 Site is located, is 159; the Village of Cahokia is 15,241; and East St. Louis is 27,006.

In the past, groundwater from the American Bottoms aquifer was a major source of water for the area and was used for industrial, non-potable public, and irrigation purposes. Groundwater levels prior to industrial and urban development were near land surface. Intensive industrial withdrawal, along with the use and construction of a system of drainage ditches, levees, and canals to protect developed areas, lowered the groundwater elevation for many years. By the mid-1980s; however, the groundwater levels had increased due to reduced pumping, high river stages, and high precipitation. Currently, no groundwater is being pumped from the American Bottoms aquifer in the vicinity of Sauget Area 2 for public, private, or industrial supply purposes.

Groundwater is not a source of drinking water in the area. The Village of Sauget and the City of East St. Louis have enacted and enforce ordinances prohibiting the use of groundwater as a potable water source. These ordinances were issued in response to historic industrial land use in the region and resulting groundwater quality impairments. The Village of Cahokia enforces an ordinance that restricts groundwater use in part of the municipality, but it does not cover the portion of the Sauget Area 2 Site that is located in Cahokia. Groundwater use restrictions will likely remain in place for the foreseeable future due to the extent of the groundwater quality impairments.

The source of drinking water for area residents is an intake in the Mississippi River. This intake is located at River Mile 181, approximately three miles north and upgradient of the Sauget Area 2 Site. The drinking water intake is owned and operated by the Illinois American Water Company (IAWC) of East St. Louis, and it serves the majority of residences in the area. IAWC supplies water to Sauget and also to portions of Cahokia and Centerville Township. Public water supply is the exclusive potable water source in the vicinity of the Sauget Area 2 Site. Downstream drinking water wells are located many miles downstream, and are not subject to potential impacts relating to the Site.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Sauget Area 2		
EPA ID: ILD000605790		
Region: 5	**State:** IL	**City/County:** Sauget and Cahokia/ St. Clair County

SITE STATUS	
NPL Status: Proposed	
Multiple OUs? Yes	**Has the site achieved construction completion?** No

REVIEW STATUS
Lead agency: EPA ***[If "Other Federal Agency", enter Agency name]*:**
Author name: Stephanie Linebaugh
Author affiliation: EPA
Review period: 1/31/2018 - 5/18/2018
Date of site inspection: 4/24/2018
Type of review: Statutory
Review number: 3
Triggering action date: 6/26/2013
Due date *(five years after triggering action date)*: 6/26/2018

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The purpose of the interim remedy for Sauget Area 2 OU2 was to address the release of contaminated groundwater to the Mississippi River in the vicinity of Site R and the associated risks. Site R is an old chemical waste landfill located next to the River. A large groundwater plume also bisects Site R and the area around it, as it migrates towards the River. Based on current information, several source areas contribute to the contamination in this plume, including but not limited to Sauget Area 2 Sites O, Q North (dog leg), and R; Sauget Area 1 Site I; the W.G. Krummrich plant, the former Clayton Chemical Facility, and other industrial facilities in the Sauget area.

Response Actions

EPA signed the interim ROD for Sauget Area 2 OU2 on September 30, 2002. This interim ROD presented an interim groundwater remedy to address the release of contaminated groundwater into the Mississippi River at the Sauget Area 2 Site in the vicinity of Site R. Physical construction of the OU2 remedial action began in August 2003 and was completed in November 2005. Although there have been multiple removal actions at the Sauget Area 2 Site, the interim remedy at Site R is the only CERCLA remedial action that has been conducted at Sauget Area 2.

The interim ROD identified the following remedial action objectives (RAOs) for the selected interim groundwater remedial action:

- Protection of aquatic life in surface water and sediments from exposure to site contaminants;
- Prevention or abatement of actual or potential exposure to nearby human populations (including workers), animals or the food chain from hazardous substances, pollutants or contaminants;
- Prevention or abatement of actual or potential contamination of drinking water supplies and ecosystems;
- Achievement of acceptable chemical-specific contaminant levels, or range of levels, for all applicable exposure routes; and
- Mitigation or abatement of the release of contaminated groundwater in the plume area to the Mississippi River so that the impact is “insignificant” or “acceptable” as required by the May 3, 2000 W.G. Krummrich Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent (AOC) (USEPA Docket No. R8H-5-00-003).

The selected interim remedy was chosen because it would greatly reduce the environmental impacts associated with the release of contaminated groundwater to the Mississippi River in the vicinity of Sauget Area 2 Site R. This was to be accomplished through the containment and extraction of contaminated groundwater downgradient of Sauget Area 2 Site R, thereby reducing mass loading to the Mississippi River. Reduction of mass loading would abate aquatic organism exposure to impacted groundwater, contamination of ecosystems, and sediment toxicity.

The major components of the interim groundwater remedy as described in the 2002 OU2 ROD are:

- Physical Barrier - A 3,500-foot-long, U-shaped, fully penetrating, jet-grouted barrier wall between the downgradient boundary of Sauget Area 2 Site R and the Mississippi River to abate the release of impacted groundwater.
- Groundwater Extraction - Three partially penetrating groundwater recovery wells, capable of pumping a combined total of 303 to 724 gallons per minute, inside the U-shaped barrier wall to abate groundwater moving to the wall.
- Groundwater Treatment - Once extracted, the contaminated groundwater is treated by the American Bottoms Regional Wastewater Treatment Facility (ABRTF) prior to being discharged to the Mississippi River.
- Groundwater Quality Monitoring - Groundwater sampling quarterly until the final groundwater remedy and associated groundwater monitoring program for the Sauget Area is in place.

- Groundwater Level Monitoring - Groundwater level monitoring to ensure acceptable performance of the physical barrier.
- Sediment and Surface Water Monitoring - Sediment and surface water sampling in the plume release area to determine the effect of any contaminants migrating through, past or beneath the barrier wall and being released to the Mississippi River.
- Institutional Controls (ICs) - ICs to limit fishing in the plume release area. Access to the Mississippi River in the plume release area is limited by existing fencing at Site R, a very steep riverbank and the absence of public roads leading to this area.

The interim ROD further stated that the gradient control achieved by the remedy would be determined by comparing water level elevations in pairs of fully penetrating piezometers that would be installed on both the inside and outside of the barrier wall. Pumping rates were to be adjusted so that the water level elevation in the inside piezometer was the same as the water level elevation in the outside piezometer. To supplement this gradient control information from the newly-installed piezometers, groundwater levels would also be measured on a quarterly basis in ten existing piezometers.

In July 2003, EPA signed an Explanation of Significant Differences (ESD) to modify the OU2 interim remedy. The ESD documented that a conventional soil-bentonite slurry barrier wall would be constructed instead of a jet-grouted barrier wall. This change did not affect the scope of the interim remedy.

Status of Implementation

The two main components of the remedial action called for in the OU2 interim ROD were the construction of the barrier wall and the installation of three groundwater recovery wells. The wall, along with the extraction wells, are referred to as the Groundwater Migration Control System (GMCS). Although the three extraction wells are intended to be the principal groundwater control measure, the barrier wall serves to reduce the volume of groundwater flowing into the extraction system from the Mississippi River during operation of the extraction wells, thereby reducing operation and maintenance (O&M) costs by reducing the volume of water treated. Construction of the remedy began in 2003 and was completed in 2005.

Barrier Wall

The barrier wall is U-shaped and was constructed to form a separation between Site R and the Mississippi River (See Appendix C, Attachment 4). The total length is 3,273 feet. Vertically, the wall extends from about 3 feet below grade to the top of bedrock, which varies from 132 to 143 feet below grade. Approximately 2,000 feet of the length of the wall runs parallel to the river bank. The two “arms” of the U each extend approximately 650 feet eastward from the north and south sides of Site R. Instead of a jet-grouted design as planned in the OU2 interim ROD, the wall was excavated using the bentonite slurry method and was backfilled with a design mixture of soil and bentonite. The barrier wall was designed to reduce recharge from the Mississippi River in the Middle Hydrogeologic Unit and Deep Hydrogeologic Unit and to act as a continuous barrier with minimal gaps.

One element of the barrier wall installation that required a modification to the design and impacted the completion schedule of the wall was the discovery of subgrade conditions that were unstable under construction loads. This was encountered when 20 feet thick of previously placed fly ash was discovered near the south end of the site. To address this problem, wick drains were installed throughout the

unstable area. The drains allowed the perched water table to drain downward through a cemented fly ash layer into the lower sand layers.

Construction of the barrier wall generated spoils that were collected and transferred to a stockpile on top of Site R. The actual volume of the stockpile on top of Site R was surveyed and calculated to be 21,090 cubic yards. In addition, 17,585 cubic yards of spoils were spread along the inside of the slurry wall to promote drainage. The spoils adjacent to the barrier wall were covered with a minimum of 6 inches of topsoil and then seeded to form a vegetative cover.

The filled spoils stockpile on top of Site R was covered with a clean soil leveling layer followed by a high-density polyethylene (HDPE) geomembrane cover. An additional clean soil layer was placed on top of the HDPE material and was seeded to form a vegetative layer.

On-site and imported fill materials were used to construct the cap over the barrier wall. A layer of 20 mil plastic sheeting and a reinforcement grid were installed to preserve the integrity of the barrier wall backfill and separate the cap material from the backfill. Drainage swales were constructed to the original grades.

Extraction Wells, Monitoring Wells, and Piezometers

The other primary elements of the GMCS installed during the remedial action were the three extraction wells, twelve monitoring wells, and eight piezometers. The three extraction wells play a critical role in the GMCS by serving to reduce the volume of water flowing into the barrier wall. Each of the partially penetrating groundwater recovery wells is designed to operate over a range of pumping rates up to about 700 gallons per minute per extraction well. A total of twelve monitoring wells, in four three-well clusters (BWMW-1 through 4), were installed downgradient of the physical barrier to determine mass loading to the Mississippi River resulting from any contaminants migrating through, past, or beneath the barrier wall. Piezometer pairs, one on the upgradient side of the barrier wall and the other on the downgradient side of the barrier wall, were installed at least 200 feet apart at four locations (PZ-1 through PZ-4).

Over 1,000 feet of below-grade pipeline was installed to transfer water from the GMCS extraction wells to the ABRTF. The ABRTF is operated by the Village of Sauget and uses biodegradation and carbon adsorption systems to treat wastewater. The terminal point of the discharge pipeline from Site R is at two concrete manholes located at the northeast corner of the ABRTF Physical/Chemical Treatment Plant property. An automatic water sample collection device is installed at the discharge vaults to collect and test the water prior to treatment. The total flow at the ABRTF discharge point is compared with the sum of the flows measured at the extraction wells every ten minutes. If the flow measurements differ by more than five percent, a leak alarm is triggered, and the pumping is stopped.

GMCS Control Methodology

Interim Operating Period (IOP) I began December 1, 2004 and ended February 28, 2005. Groundwater level, surface water level, and pumping rate data collected during IOP I demonstrated that the GMCS could not be operated to achieve the ROD requirement for zero or inward gradient across the barrier wall under low river stage conditions even when pumping at maximum system capacity. Consequently, IOP II was conducted using groundwater flow into the barrier wall, computed using Darcy's Law, as a performance measure from August 1, 2005 through October 31, 2005. IOP II concluded that additional operational data were needed to optimize and simplify operation of the system. IOP III was conducted February 1, 2006 through May 31, 2006, in which results concluded the flow data obtained during IOP I,

II, and III demonstrate that using Darcy's Law provides flow estimates that are very close to actual inflow. IOP IV was conducted from October 1, 2009 through February 15, 2010, to confirm the results for IOP III. Completion of IOP IV demonstrated that the GMCS meets System Convergence over 95% of the time over a wide range of river elevations and pumping rates. Since October 2009, the GMCS has operated as described in the IOP IV Work Plan (November 2009) and incorporated into the approved O&M Plan (May 2013).

Institutional Controls

Table 1: Summary of Planned and/or Implemented Institutional Controls (ICs)

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater discharge to surface water	Yes	Yes	Restrict fishing near contaminated areas Public education/ awareness of potential risks associated with consumption of contaminated fish	Warning signs are posted
Groundwater (review of existing groundwater contamination will be done as part of the regional groundwater (Sauget Area 1 and Sauget Area 2 Sites) ROD	To be reviewed	No, to be reviewed with final regional groundwater remedy	Prohibit groundwater use	Ordinance #99-5- Village of Sauget Ordinance #97-10066 - City of East St. Louis

One objective of the access controls listed in the OU2 interim ROD was to limit fishing in the plume release area. Access to the Mississippi River in the plume release area is limited by existing fencing at Site R, locked entrance gates, a very steep riverbank, and the absence of public roads leading to the area. ICs used at the Site include warning signs posted near the northern and southern portions of Site along the riverbank. Routine maintenance in the O&M Plan includes quarterly inspections of warning signs, perimeter fencing, and locks to ensure they are in place and effective.

Although not required by the OU2 interim ROD, two ICs that are in place in the vicinity of Sauget Area 2 are ordinances passed by the Village of Sauget in 1999 and by the City of East St. Louis in 1997. Both ordinances prohibit use of groundwater for drinking within the corporate limits of the municipality. The evaluation of ICs prohibiting groundwater use in the area of the Sauget Area 2 Sites will be part of the final regional (Sauget Area 1 and Sauget Area 2 Sites) groundwater ROD.

Current Compliance

Routine maintenance in the O&M Plan includes quarterly inspections of warning signs, perimeter fencing and locks to ensure they are still in place and effective.

Long-Term Stewardship

As stated above, the O&M Plan includes quarterly inspections of warning signs, perimeter fencing, and locks. The regional groundwater ROD will evaluate the adequacy of the ICs currently in place and determine if other measures are necessary. If it is determined in the regional groundwater ROD that additional ICs are necessary, a long-term plan for evaluating, monitoring, and maintaining the additional controls will be developed.

Systems Operations/Operation & Maintenance

The GMCS O&M Plan covers the long-term O&M of the GMCS and the maintenance of site engineering and current ICs. To help characterize the impact that the GMCS is having on the surrounding environment, the O&M Plan requires the semi-annual collection and testing of surface water samples from the Mississippi River to determine the effect of any contaminants migrating through, past, or beneath the barrier wall and being released to the Mississippi River.

Surface water samples have been collected since 2005 and will continue to be collected from Sampling Stations 2, 3, 4, 5 and 9, which are located in the former plume discharge area (PDA). Samples are analyzed for volatile organic compounds (VOCs), semi-organic compounds (SVOCs), herbicides, pesticides, and metals. These surface water samples will continue to be collected once during a typical low-flow period in the spring or early summer, and once during a typical low-flow period in the fall or early winter.

The site-specific, surface water benchmarks developed for this Site are as follow:

2, 4-Dichlorophenoxyacetic Acid	8 ug/L
Chlorobenzene	50 ug/L
P-Chloroaniline	50 ug/L

EPA approved the O&M Plan in May 2013; thus, surface water sample results are compared to the surface water benchmarks listed above to see if levels over time are above benchmarks and/or increasing. Exceedances of benchmark compounds during a sampling event will be evaluated further using co-located surface water samples and additional toxicity testing. Sediment toxicity sampling will be required if long-term monitoring of surface water shows concentrations of 2, 4-dichlorophenoxyacetic acid, chlorobenzene, or P-chloroanline above surface water benchmarks.

On May 10, 2018, EPA approved the PRP Group's request for a reduction in groundwater monitoring and reporting frequency related to monitoring well nests MW-1 through MW-4, from quarterly to semi-annual. Quarterly sampling and reporting has been conducted in these well nests since 2005. The groundwater being sampled is in a stagnant zone between the barrier wall and the river. The extensive quarterly data base going back over 13 years shows that changes in water quality will be quite slow, and can be effectively monitored semi-annually. The O&M Plan was updated to reflect this change on May 16, 2018.

A comprehensive list of routine maintenance activities for both the barrier wall and the extraction system is included in the O&M Plan. Some of the routine O&M activities include making backups of data, measurement of back pressure in discharge lines at each well, inspection of motors, periodic downhole video inspection of well screens, checking for bio-fouling in wells, verification of valve settings in actuators, and checking air-conditioning and heater filters. In addition, on a quarterly basis, the stockpile containment cell cover is inspected for erosion and ponding caused by settlement; warning

signs, fencing and locks are checked; and erosion controls and drainage structures are inspected. The alignment of the slurry wall is checked annually for signs of settlement or subsidence.

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations.

Table 2: Protectiveness Determinations/Statements from the 2013 FYR

OU #	Protectiveness Determination	Protectiveness Statement
2	Will be Protective	The selected interim remedy for OU2 is expected to be protective of human health and the environment upon completion of the final OU2 groundwater remedy. Data collected during the past five-year period demonstrates the OU2 interim remedy is operating as intended and making progress towards achieving the RAOs identified in the interim ROD. The GMCS is significantly reducing the discharge of contaminated groundwater into the Mississippi River as measured by the attainment of a zero or inward hydraulic gradient across the barrier wall and a 98 percent reduction in the mass flux of contaminants to the River.

No issues or recommendations were identified for the OU2 interim remedy in the 2013 FYR.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification

A public notice was published in the local newspaper, the *Belleville News-Democrat* on June 23, 2018, stating that EPA was beginning a FYR and inviting the public to submit any comments to EPA. The results of the review and the report will be made available at the Site information repository located at Cahokia Public Library, 140 Cahokia Park Drive, Cahokia, Illinois.

Data Review

This FYR is based on review of relevant documents, including O&M records and monitoring data relating to the OU2 interim remedy. As part of this effort, EPA also reviewed performance standards for calculating mass flux, controlling pumping rates for achieving zero or inward hydraulic gradient across the barrier wall, and site-specific, protective surface water concentration benchmarks, as required in the September 30, 2002 interim ROD and in the O&M Plan.

The RAO performance measures for the barrier wall and extraction system specified in the OU2 interim action ROD were: (1) calculation of mass loading to the Mississippi River, (2) control of the gradient across the barrier wall, and (3) groundwater, surface water, and sediment sampling. The required

sampling and data collection has occurred as stated in the O&M Plan since the 2013 FYR. The procedures for each of the performance measures for calculating mass flux, pumping rates, and site-specific contaminant benchmarks were finalized and approved in the O&M Plan (May 2013).

No compliance violations related to the collection and extraction of impacted groundwater from Sauget Area 2 Site have occurred at the Site and the ABRTF between 2013 and 2018. With regard to the discharge into the Mississippi River, ABRTF has maintained zero exceedances for the past five years and has been in compliance with all National Pollutant Discharge Elimination System permit limits.

Summary of Field Activities

The following discussion provides a summary of field activities and results of the groundwater and surface water monitoring at Site R during the quarterly groundwater sampling and semi-annual surface water sampling from January 2013 through 2017. Performance verification sampling for the Site R GMCS has included quarterly groundwater sampling and semi-annual surface water and sediment sampling since 2005. Sampling efforts and results are discussed in the following sections for the review period 2013 to 2017.

Groundwater Sampling

The PRPs' consultant performed quarterly groundwater monitoring sampling events on twelve barrier wall monitoring wells from June 2005 to the present. Sampling events from March 2013 through December 2017 are included in this evaluation based on the quarterly groundwater monitoring reports submitted by the PRP for this period (See Appendix C, Attachments 1 through 3).

Analytes detected in the groundwater samples have varied over time, but have consistently included detections of VOCs, SVOCs, pesticides, herbicides, and metals.

Groundwater Data Review

The PRPs' consultant collected quarterly groundwater sampling data since June 2005 for four sets of nested monitoring wells located between the barrier wall and the River. The compliance wells are labeled BWMW-1 through 4, with three vertical completions per well nest labeled shallow (S), middle (M) and deep (D). The groundwater samples are analyzed for: VOCs, SVOC, pesticides, herbicides, metals, total organic carbon, and total dissolved solids. Most compounds exhibited stable or decreasing concentration trends. Four indicator compounds, benzene, chlorobenzene, 1-4 dichlorobenzene, and 4-chloroanilinne, were analyzed during this review period and overall show stable or decreasing concentration trends in the four compliance wells (See Appendix C, Attachment 3).

Semi-annual Sediment and Surface Water Sampling

The PRPs' consultant collected sediment and surface water samples in sample locations adjacent to Site R to determine the concentrations over time of any contaminants migrating through, around, or potentially beneath the barrier wall and discharging into the Mississippi River. Under the Performance Standard Verification Plan (Volume 3 of the July 2003 GMCS Final Design Submittal), surface water and sediment samples were identified for collection at five locations designated as PDA 2, 3, 4, 5, and 9 (See Appendix C, Attachment 4). These five locations were chosen because toxicity was observed during the October/November 2000 sampling event by Menzie-Cura & Associates, Inc., which were summarized in an Ecological Risk Assessment (ERA) performed for the W.G. Krummrich Facility under EPA RCRA jurisdiction. The ERA became a basis for the installation of the Site R GMCS and barrier wall.

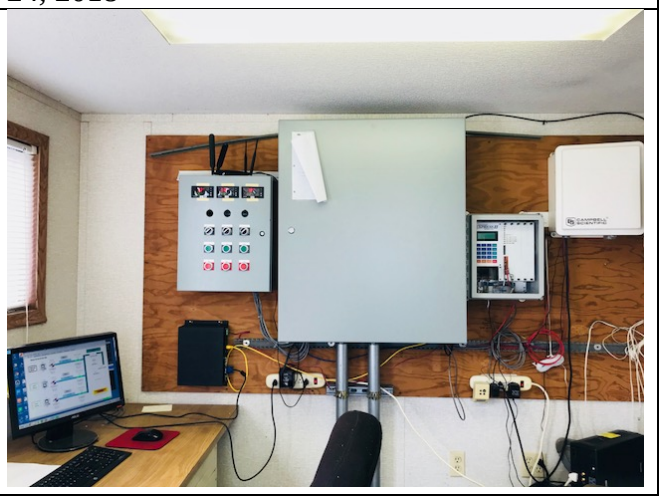
Semi-annual surface water sampling events have been performed by the PRPs' consultant at five stations discussed above in the Mississippi River during this review period from 2013-2017. There were no exceedances of the three benchmark compounds during this FYR period; therefore, no sediment toxicity sampling was required per the O&M Plan.

Site Inspection

The inspection of the Site was conducted on 4/24/2018. In attendance were the EPA Project Manager, Stephanie Linebaugh; Paul Lake, Illinois EPA Project Manager; PRP Group representatives, Steve Smith and Bill Johnson (Eastman); and PRP Group consultant, Nathan McNurlen (AECOM). The purpose of the inspection was to assess the protectiveness of the remedy. The Site visit included a visual inspection of the remedy components and a review of documents related to the O&M at the Site. The Site Inspection Checklist is included as Attachment 7 in Appendix C.

No significant issues were noted during the Site inspection. The following three minor issues were noted during the Site inspection: 1) tree growth close to the electric panel of EW-2 needs to be cut back; 2) brush growth around PZ4-Out needs to be cleared; and 3) perimeter fence needs repair in two locations where trees have fallen on the fence. These minor issues were discussed with the PRPs during the Site inspection and the PRPs promptly addressed the first two issues. EPA was notified on May 31, 2018 that perimeter fence repairs have also been completed.

Photo 1: Photo of warning sign at Site R entry gate, April 24, 2018	Photo 2: Photo of warning signs at ABRTF gate assess, April 24, 2018
	
Photo 3: Photo of embankment of Site R along Mississippi River, April 24, 2018	Photo 4: Photo of fallen tree on perimeter fence, April 24, 2018
	

Photo 5: Photo of secure GMCS control trailer, April 24, 2018	Photo 6: Photo of GMCS control room, April 24, 2018
	
Photo 7: Photo of tree growing into EW-2 control panel, April 24, 2018	Photo 8: Photo of brush growth around PZ4-Out, April 24, 2018
	

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Yes.
Remedial Action Performance

The remedy at the Site is functioning as intended by the interim ROD and ESD. This determination was made after a review of the relevant documents and a Site inspection. Data collected during the past five-year period demonstrate that the OU2 interim remedy is operating as intended and making progress towards meeting the RAOs identified in the interim ROD. The GMCS is significantly reducing the discharge of contaminated groundwater into the Mississippi River as measured by the attainment of a zero or inward hydraulic gradient across the barrier wall and a 98 percent reduction in the mass flux of contaminants to the River.

System Operation and Maintenance

The GMCS continues to operate in compliance with the interim ROD and ESD. Groundwater data on the GMCS system performance show an average convergent rate of 98.6% from January 2013 through March 2018.

Extraction & Monitoring Well Systems

The extraction and monitoring well systems are in good condition and fully operational.

Opportunities for Optimization

On April 27, 2018, the PRP Group submitted to EPA a request for EPA approval of a reduction in groundwater monitoring and reporting frequency related to monitoring well nests MW-1 through MW-4, from quarterly to semi-annual. The groundwater being sampled is in a stagnant zone between the barrier wall and the River. The extensive quarterly data base going back over 13 years shows that changes in water quality will be quite slow, and can be effectively monitored semi-annually. The O&M Plan will be updated to reflect this change. EPA approved the request on May 10, 2018.

Implementation of Institutional Controls and Other Measures

ICs have been maintained during this review period as required in the O&M Plan. Access controls are in place and are inspected quarterly to ensure effectiveness.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Yes. The assumptions and information on which the OU2 interim ROD was based are still valid. There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy.

Changes in Standards and To Be Considered

Due to the limited scope of the interim remedy for OU2, EPA invoked an interim action waiver of chemical-specific Applicable or Relevant and Appropriate Requirements (ARARs) during finalization of the OU2 interim ROD. No changes in the location-specific or action-specific ARARs have been made and no new standards or to be considered (TBC) requirements affecting the protectiveness of the remedy have been identified.

Changes in Exposure Pathways

There have been no changes in the potential exposure pathways at the Site since the implementation of the remedy for the Site. The property use has not changed since the implementation of the ROD. In 2017 the Army Corp of Engineers began installing new relief wells along the levee, which is part of its planned upgrade from the current 100-year flood event relief well system to a 500-year flood event relief well system. Effects of the upgraded relief well system will be evaluated as part of the regional groundwater investigation.

Changes in Risk Assessment Methods

Standardized risk assessment methods have not changed in a way that would affect the assessment of the protectiveness of the remedy.

Expected Progress towards Meeting RAOs

The GMCS is significantly reducing releases of contaminated groundwater into the Mississippi River and is making progress towards achieving the RAOs.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. There have been no newly identified risks to human health or ecological targets, impacts from natural disasters, or any other information that has been identified that could affect the protectiveness of the remedy for the Site.

VI. ISSUES/RECOMMENDATIONS

There were no issues or recommendations identified affecting current or future protectiveness of the remedy.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
Operable Unit: 2	*Protectiveness Determination:* Will be Protective
Protectiveness Statement: The selected interim remedy for OU2 is expected to be protective of human health and the environment upon completion of the final regional OU2 groundwater remedy. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could result in unacceptable risks in these areas. Data collected during the past five-year period demonstrates the OU2 interim remedy is operating as intended and making progress towards achieving the RAOs identified in the interim ROD. The GMCS is significantly reducing the discharge of contaminated groundwater into the Mississippi River as measured by the attainment of a zero or inward hydraulic gradient across the barrier wall and a 98 percent reduction in the mass flux of contaminants to the River.	

VIII. NEXT REVIEW

The next FYR report for the Sauget Area 2 Superfund Site is required no less than five years from EPA's signature date of this review.

APPENDIX A – REFERENCE LIST

- Five-Year Review Report for Sauget Area 2 Superfund Site, St. Clair County, Illinois, June 26, 2013
- Record of Decision for the Groundwater Operable Unit (OU2) Sauget Area 2 Superfund Site, Sauget, Illinois, September 2002
- Groundwater Migration Control System Operation and Maintenance Plan, Site R, Sauget, Illinois, May 2013
- Performance Verification Sampling Program October 2013 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program March 2014 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program October 2014 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program March 2015 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program October 2015 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program March 2016 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program October 2016 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program March 2017 Event, Groundwater Migration Control System, Sauget Area 2
- Performance Verification Sampling Program October 2017 Event, Groundwater Migration Control System, Sauget Area 2

APPENDIX B – EXISTING SITE INFORMATION

A. SITE CHRONOLOGY

Table 1: Site Chronology

Event	Date
Industrial Salvage and Disposal, Inc. operated the industrial waste landfill now called Site R	1957 to 1977
Monsanto completed clay cover over Site R	1979
Monsanto completed stabilization project along Mississippi River adjacent to Site R	1985
State of Illinois and Monsanto signed a Consent Decree for a Remedial Investigation/ Feasibility Study (RI/FS)	February 13, 1992
First Removal Action Conducted for Operable Unit (OU)1	February 1995
Second Removal Action Conducted for OU1	October 1999
Monsanto signs a Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent (AOC) with EPA	May 3, 2000
AOC for RI/FS Signed	November 24, 2000
Ecological Risk Assessment for Mississippi River	June 2001
Proposed to National Priorities List (NPL)	September 13, 2001
EPA sent request to implementing Potentially Responsible Parties (PRPs) to conduct a focused feasibility study (FFS) of Site R	November 14, 2001
FFS submitted to EPA	April 1, 2002
Public Comment Period on Proposed Plan for Site R	June 17, 2002 to August 16, 2002
Interim Record of Decision for Site R Groundwater OU2 signed	September 30, 2002
Unilateral Adminisrative Order for Remedial Design/Remedial Action for OU2 issued	September 30, 2002
Start of Remedial Design for OU2	February 15, 2003
Explanation of Significant Differences signed	July 30, 2003
Remedial Action Construction Start OU2	August 18, 2003
Performance Verification Sampling begins	June 2005
Remedial Action Construction Completed OU2	November 2005
First Five-Year Review Completed	June 26, 2008
Groundwater Migration and Control System Operation and Maintenance Plan Approved	May 13, 2013
Second Five-Year Review Completed	June 26, 2013

B. BACKGROUND

Physical Characteristics

Sauget Area 2 is located on the eastern side of the Mississippi River directly opposite St. Louis, Missouri (See Appendix C, Attachment 4, Figure 1). More specifically, the Sauget Area 2 site is situated south of East St. Louis, Illinois, within the boundaries of the City of East St. Louis and the Villages of Cahokia and Sauget, Illinois. The site extends approximately three-quarters to one mile east of the eastern bank of the Mississippi River.

The Sauget Area 2 site as a whole consists of five inactive disposal areas (Sites O, P, Q, R and S) described in Table 2 below. Of these disposal sites, three are closed landfills (Sites P, Q and R), one consists of four closed sludge lagoons (Site O), and one is a waste disposal site (Site S) associated with an abandoned solvent reclamation facility (See Appendix C, Attachment 4, Figure 2). The locations and acreage of each site are shown in the table below.

Table 2. Descriptions of Sauget Area 2 Disposal Areas

Site Name	Size (acres)	Location	Description
Site O	20	Sauget, Illinois	Located on Mobile Avenue, northeast of the American Bottoms Regional Wastewater Treatment Facility (ABRTF) and east of the flood control levee.
Site P	20	East St. Louis and Sauget, Illinois	Bounded by Illinois Central Gulf Railroad tracks, the Terminal Railroad Association tracks and Monsanto Avenue.
Site Q – northern portion	65	Sauget and Cahokia, Illinois	The northern portion of Site Q is bordered on the north by Site R and Monsanto Avenue; on the south by the main track of the Alton and Southern Railroad; on the east by the flood control levee; and on the west by the Mississippi River. The northern portion of Site Q that wraps around the eastern boundary of Site R is known as the "dogleg" portion of Site Q.
Site Q – southern portion	25	Sauget and Cahokia, Illinois	The southern portion of Site Q is bordered on the north by the Alton and Southern Railroad; on the south by Cargill Road; on the east by the flood control levee and the Illinois Central Gulf Railroad; and on the west by a 10-foot wide easement owned by Union Electric for transmission lines and a spur track of the Alton and Southern Railroad.
Site R	36	Sauget, Illinois	Site R is bounded on the north by Monsanto Avenue; on the east by the dogleg portion of Site Q; on the south by the main portion of Site Q; and on the west by the Mississippi River. The address for the site is 5 Riverview Avenue.
Site S	<1	Sauget, Illinois	Site S is less than one acre in size and is located southwest of Site O.

Sauget Area 2 is situated in a floodplain of the Mississippi River called the American Bottoms (See Appendix C, Attachment 4, Figure 2). In total, the American Bottoms floodplain encompasses 175 square miles, is 30 miles long, and has a maximum width of 11 miles. It is bordered on the west by the Mississippi River and on the east by bluffs that rise 150 to 200 feet above the valley bottom. The

floodplain is relatively flat and generally slopes from north to south and from east to west. Land surface lies between 400 and 445 feet above mean sea level.

Two types of water-bearing formations exist in the American Bottoms floodplain area: unconsolidated and consolidated. The unconsolidated formations (predominantly silt, sand, and gravel) are those that lie between the ground surface and the bedrock/gravel interface. The thickness of the unconsolidated formation varies throughout the area but is typically estimated to be approximately 100 feet. Finer-grained sediments generally dominate at the ground surface and become coarser and more permeable with depth, creating semi-confined conditions within the aquifer. The consolidated formations are deep bedrock units of limestone and dolomite that exhibit low permeability and are not considered to be a significant source for groundwater in the area. The groundwater level in the vicinity of Site R is generally between 10 to 20 feet below ground surface, but fluctuates during times of precipitation. Recharge to the aquifer occurs through four sources: precipitation, infiltration from the Mississippi River, inflow from the buried valley channel of the Mississippi River, and subsurface flow from the bluffs that border the floodplain on the east.

Three distinct hydrogeologic units can be identified in the vicinity of Site R: (1) a shallow hydrogeologic unit (SHU); (2) a middle hydrogeologic unit (MHU); and (3) a deep hydrogeologic unit DHU. The 20 feet thick SHU includes the Cahokia Alluvium (recent deposits) and the uppermost portion of the Henry Formation. The 30 feet thick MHU is formed by the upper to middle, medium to coarse sand portions of the Henry Formation. At the bottom of the aquifer is the DHU, which includes the high permeability, coarse-grained deposits of the lower Henry Formation. This zone is 40 feet thick. Groundwater flow velocity is on the order of 0.02 feet per day (7 feet per year) in the SHU, 4 feet per day (1,500 feet per year) in the MHU, and 6 feet per day (2,200 feet per year) in the DHU.

During low river stage conditions, groundwater at Sauget Area 2 flows from east to west and releases to the Mississippi River, the natural point of release for groundwater in the American Bottoms aquifer. When flood stage occurs in the Mississippi River, flow reverses. Under these conditions, groundwater flows from west to east.

Land and Resource Use

Heavy industry has been present on the east bank of the Mississippi River between Cahokia and Alton, Illinois, for nearly a century. Industrial activity in the area peaked in the 1960s. Although many industrial facilities have closed down throughout the American Bottoms floodplain, Sauget Area 2 and the surrounding area is still highly industrialized (See Appendix C, Attachment 4, Figure 3). Currently, the area is used for industry, warehousing, bulk storage (coal, refined petroleum, lawn and garden products and grain), wastewater treatment, hazardous waste treatment, waste recycling and truck terminals. In addition to heavy industry, the area also has commercial facilities, bars, nightclubs, convenience stores and restaurants. A number of petroleum, petroleum product, and natural gas pipelines are located in the area.

No residential land use is located immediately adjacent to or downgradient of Sites O, P, Q, R and S and other industrial facilities in the Sauget area. Residential areas of Sauget and East St. Louis are separated from the Sauget Area 2 area by other industries or by undeveloped tracts of land. Limited residential areas exist approximately 3,000 feet to the northeast and southeast of the site. According to the 2010 census, the population of the Village of Sauget, which is where the majority of the Sauget Area 2 site is located, is 159.

In addition to manufacturing, Sauget and the surrounding areas have historically been used for waste disposal. Six closed landfills (Sauget Area 2 Sites P, Q and R and Sauget Area 1 Sites G, H and I), four closed sludge lagoons (Sauget Area 2 Site O), a closed tank-truck wash water lagoon (Sauget Area 1 Site L) and a waste disposal site (Sauget Area 2 Site S) associated with an abandoned solvent reclamation facility (Resource Recovery Group) are located in the Sauget area. The Sauget Area 1 site is proposed for the NPL and is currently being investigated. The W.G. Krummrich manufacturing plant is a RCRA facility located approximately 3,000 feet to the east of Site R. The W.G. Krummrich facility is conducting a remedial action under a RCRA Administrative Order on Consent.

In the past, groundwater from the American Bottoms aquifer was a major source of water for the area and was used for industrial, public, and irrigation purposes. Groundwater levels prior to industrial and urban development were near land surface. Intensive industrial withdrawal, along with the use and construction of a system of drainage ditches, levees, and canals to protect developed areas, lowered the groundwater elevation for many years. By the mid-1980s, however, the groundwater levels had increased due to reduced pumping, high river stages, and high precipitation. Currently, no groundwater is being pumped from the American Bottoms aquifer in the vicinity of Sauget Area 2 for public, private or industrial supply purposes.

Groundwater is not a source of drinking water in the area. The Village of Sauget and the City of East St. Louis have issued ordinances prohibiting the use of groundwater as a potable water source (See Appendix C, Attachment 5). These ordinances were issued in response to historic industrial land use in the region and resulting groundwater quality impairments. The Village of Cahokia has an ordinance that restricts groundwater use in part of the municipality, but it does not cover the portion of the Sauget Area 2 site that is located in Cahokia. Groundwater use restrictions will likely remain in place for the foreseeable future due to the extent of the groundwater quality impairments.

The source of drinking water for area residents is an intake in the Mississippi River. This intake is located at River Mile 181, approximately three miles north and upgradient of Sauget Area 2. The drinking water intake is owned and operated by the Illinois American Water Company (IAWC) of East St. Louis, and it serves the majority of residences in the area. IAWC supplies water to Sauget and also to portions of Cahokia and Centerville Township. Public water supply is the exclusive potable water source in the vicinity of the Sauget Area 2 site.

The nearest downstream surface water intake on the Illinois side of the Mississippi River is located at River Mile 110, approximately 68 miles south of Sauget Area 2. This intake supplies drinking water to residents in the Town of Chester and surrounding areas in Randolf County, Illinois. The nearest downstream public water supply on the Missouri side of the river is located at River Mile 149, approximately 29 miles south of Sauget Area 2. At this location, the Village of Crystal City, Missouri, utilizes a Ranney well adjacent to the Mississippi River as a source for drinking water.

The Mississippi River is the major surface water body draining the area. The stretch of the river adjacent to Site R is bounded by steep embankments lined with rip-rap. A few scattered structures in the river, such as a wing dam and a sunken barge, offer some access points for aquatic birds and mammals and potential protection for fish. In the vicinity of Site R, no bordering wetlands, appreciable bordering vegetation, or submerged or emergent vegetation are present. Recreational and commercial fishing does occur in the Mississippi River; however, no fishing access is available along the Site R border. The Sauget Area 2 property is used as habitat by at least six threatened and endangered species, including the federally threatened bald eagle and state endangered snowy egret and little blue heron.

Future land use for the Sauget Area 2 site and surrounding areas are anticipated to be similar to current land use.

History of Contamination

As stated above, the Sauget Area 2 site as a whole consists of five inactive disposal areas -- Sites O, P, Q, R and S. A brief description of the disposal and contaminant history for each of the disposal sites is below.

Site O - In 1952, the Village of Sauget began operating a wastewater treatment plant in the area now referred to as Site O. In addition to providing treatment for the Village of Sauget, the plant treated effluent from a number of Sauget industries. In 1965, the four lagoons which comprise Site O were constructed at the site. Between approximately 1966 and 1978, the lagoons were used to dispose of clarifier sludge from the Village of Sauget wastewater plant. Compounds detected in subsurface soil and/or groundwater in the area of Site O include toluene, xylenes, trichloroethene, tetrachloroethene, polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxin, chlorobenzenes, chlorophenols, and chloroanilines.

Site P - Disposal Site P was operated by Sauget and Company from 1973 to approximately 1984. It was an Illinois EPA-permitted landfill and was used for municipal and industrial waste disposal. Some of the general industrial wastes accepted at Site P included diatomaceous-earth filter cake from the Edwin Cooper Company and non-chemical waste from Monsanto.

Site Q - Between the 1950s and the 1970s, Site Q operated as a landfill that accepted municipal waste, septic tank pumpings, drums, organic and inorganics wastes, solvents, pesticides, paint sludges, plant trash, waste from industrial facilities, and demolition debris. Disposal at Site Q occurred both on the surface and subsurface. Compounds detected in soil and/or groundwater in the area of Site Q include toluene, xylenes, PAHs, phthalates, chlorobenzenes, chlorophenols, including pentachlorophenol (PCP), and chloroanilines.

Site R - Industrial Salvage and Disposal Inc. operated the River's Edge Landfill, now called Site R, for Monsanto from 1957 to 1977. Hazardous and non-hazardous bulk liquid and solid chemical wastes and drummed chemical wastes from Monsanto's W.G. Krummrich plant and, to a lesser degree its Queeny plant in St. Louis, were disposed of at the site. Disposal began in the northern portion of the site and expanded southward. Wastes contained toluene, xylenes, PAHs, chlorobenzenes, chlorophenols, PCP, chloroanilines, phenols, aromatic nitro compounds, aromatic amines, aromatic nitro amines, chlorinated aromatic hydrocarbons, aromatic and aliphatic carboxylic acids and condensation products of these compounds.

Site S - In the mid-1960s, wastes from the former Clayton Chemical property were disposed of in a shallow, on-site excavation which is now designated as disposal Site S. The wastes were from the solvent recovery process at Clayton which involved steam-stripping. Still bottoms from the stripping process were disposed of at the site.

Initial Response

A number of initial response actions have been taken at three of the five sites that comprise the Sauget Area 2 site. No action has been taken at Site P or Site S. Initial response actions taken at Sites O, Q, and R are summarized below.

Site O

In 1980, the Village of Sauget closed the four lagoons that comprise Site O by stabilizing the sludge with lime and covering it with approximately two feet of soil. The construction of the cover was not overseen or approved by either EPA or Illinois EPA. Currently, the former lagoons are vegetated.

Site Q

In 1993, Site Q was flooded, and river currents unearthed a number of barrels containing hazardous waste. EPA conducted a removal action in the northern portion of Site Q in 1995 to stabilize the area scoured by the flood waters. On October 18, 1999, EPA initiated a second removal action at Site Q. EPA excavated site waste from eight different areas on the 25-acre southern portion of Site Q. The excavations were primarily focused on two former ponds in the southeast corner of Site Q. Two waste streams were developed based on analytical results of the waste piles: a low-level waste stream with soil concentrations less than 50 part per million (ppm) of PCBs and a high-level waste stream with soil concentrations greater than 50 ppm of PCBs. Approximately 17,032 tons of waste, comprised of about 20 percent low-level waste and 80 percent high-level waste were shipped off-site for disposal. In addition, 3,271 drums were removed and disposed of. The second removal action was completed on April 5, 2000.

Site R

Pursuant to a negotiated agreement with the State of Illinois, Monsanto installed a clay cover on Site R in 1979 to cover the waste, limit surface water infiltration through the landfill, and prevent direct contact with the landfill material. The cover thickness ranges from 2 feet to approximately 8 feet. In 1985, Monsanto installed a 2,250-foot-long rock revetment along the east bank of the Mississippi River downgradient of Site R. The purpose of the stabilization project was to prevent further erosion of the riverbank and thereby minimize potential for the release of waste material from the landfill. During a flood in 1993, Site R was flooded but the clay cap was not overtopped. No erosion of the riverbank or cap resulted from this flood.

APPENDIX C – ATTACHMENTS

ATTACHMENT 1 – GMCS Surface Water Sample Analytical Results 2013 – 2017

ATTACHMENT 2 – GMCS Performance Monitoring Data Table 2013 – March 2018

ATTACHMENT 3 – Groundwater Monitoring Well Data

ATTACHMENT 4 – Figures
Figure 1 – Site Location
Figure 2 – Sauget Area 2 Sites
Figure 3 – Sauget Area 2 – Industrial Areas
Figure 4 – Plume Discharge Area

ATTACHMENT 5 – Ordinances for Village of Sauget and City of East St. Louis

ATTACHMENT 6 – Public Notice about Five-Year Review

ATTACHMENT 7 – Site Inspection Checklist

ATTACHMENT 1 - GMCS Surface Water Sample Analytical Results

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

		VOCs																					
Sample ID	Sample Date	1-(6-Azauracil-1-yl)-3-(5-ethyluracil-1- (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1,2,2-Tetrachloroethane (ug/L)	1,1,2-Trichloroethane (ug/L)	1,1-Dichloroethane (ug/L)	1,1-Dichloroethylene (ug/L)	1,2-Dichloroethane (ug/L)	1,2-Dichloroethene (total) (ug/L)	1,2-Dichloropropane (ug/L)	2-Butanone (MEK) (ug/L)	2-Propanol (ug/L)	4-Methyl-2-pentanone (MIBK) (ug/L)	6H-1,4-Diazepin-6-one, 2,3-dihydro-5,7-dimethyl-, 4-nitroph	Acetamide, 2-(4-morpholylcarbonylmethyl)thio-N-phenyl- (ug/	Acetone (ug/L)	Benzene (ug/L)	Bromodichloromethane (ug/L)	Bromoform (ug/L)	Bromomethane (ug/L)	Carbon Dioxide (ug/L)	Carbon Disulfide (ug/L)	Carbon Tetrachloride (ug/L)	Chlorobenzene (ug/L)	Chlorodibromomethane (ug/L)
PDA-2																									
SW-SA2-GMCS-2	3/28/2013		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<1		<2	<1	<1	<1
SW-SA2-GMCS-2	5/28/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2	10/23/2014	6.4 T J N	<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2	3/26/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2	8/20/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	3 J	<1
SW-SA2-GMCS-2-DUP	8/20/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2	3/22/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2	10/26/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10	21 T J N		<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2-DUP	10/26/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-2	10/26/2017		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
PDA-3																									
SW-SA2-GMCS-3	3/28/2013		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<1		<2	<1	<1	<1
SW-SA2-GMCS-3	5/28/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3	10/23/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5	33 T J N	<2	<1	<1	<1
SW-SA2-GMCS-3	3/26/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3-DUP	3/26/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3	8/20/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3	3/22/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3-DUP	3/22/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3	10/26/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10		20 T J N	<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-3	10/26/2017		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
PDA-4																									
SW-SA2-GMCS-4	3/28/2013		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<1		<2	<1	<1	<1
SW-SA2-GMCS-4	5/28/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4	10/23/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5	14 T J N	<2	<1	<1	<1
SW-SA2-GMCS-4-DUP	10/23/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4	3/26/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4	8/20/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4	3/22/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4	10/26/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4	10/26/2017		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-4-DUP	10/26/2017		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
PDA-5																									
SW-SA2-GMCS-5	3/28/2013		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<1		<2	<1	<1	<1
SW-SA2-GMCS-5-DUP	3/28/2013		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<1		<2	<1	<1	<1
SW-SA2-GMCS-5	5/28/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-5	10/23/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5	27 T J N	<2	<1	<1	<1
SW-SA2-GMCS-5	3/26/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-5	8/20/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-5	3/22/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-5	10/26/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-5	10/26/2017		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
PDA-9																									
SW-SA2-GMCS-9	3/28/2013		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<1		<2	<1	<1	<1
SW-SA2-GMCS-9	5/28/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-9-Dup	5/28/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<25	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-9	10/23/2014		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5	6.8 T J N	<2	<1	<1	<1
SW-SA2-GMCS-9	3/26/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-9	8/20/2015		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-9	3/22/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-9	10/26/2016		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10	30 J	<10			<10	<1	<1	<1	<5		<2	<1	<1	<1
SW-SA2-GMCS-9	10/26/2017		<1	<1	<1	<1	<1	<1	<1	<2	<1	<10		<10			<10	<1	<1	<1	<5		<2	<1	<1	<1

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

		VOCs																				
Sample ID	Sample Date	Chloroethane (ug/L)	Chloroform (ug/L)	Chloromethane (ug/L)	cis-1,2-Dichloroethene (ug/L)	cis-1,3-Dichloropropene (ug/L)	Dichloromethane (ug/L)	Ethylbenzene (ug/L)	Germacyclohexane, 1,1-dichloro- (ug/L)	Methyl N-Butyl Ketone (ug/L)	N,N'-Bis-3-oxapentamethyleneformamidinum (ug/L)	o-Xylene (ug/L)	p-Xylene/m-Xylene (ug/L)	Styrene (Monomer) (ug/L)	Sulfur dioxide (ug/L)	Tentatively Identified Compound (ug/L)	Tetrachloroethene (ug/L)	Tetrahydrofuran (ug/L)	Toluene (ug/L)	trans-1,2-Dichloroethene (ug/L)	trans-1,3-Dichloropropene (ug/L)	Trichloroethene (ug/L)	Vinyl chloride (ug/L)	Xylenes, Total (ug/L)
PDA-2																									
SW-SA2-GMCS-2	3/28/2013	<1	<1	<1	<1	<1	<5	<1		<10				<1	3500 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-2	5/28/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	2200 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-2	10/23/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	1500 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-2	3/26/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-2	8/20/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-2-DUP	8/20/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-2	3/22/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-2	10/26/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1	160 T J N		<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-2-DUP	10/26/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1	940 T J N		<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-2	10/26/2017	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
PDA-3																									
SW-SA2-GMCS-3	3/28/2013	<1	<1	<1	<1	<1	<5	<1		<10				<1	1600 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-3	5/28/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	3800 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-3	10/23/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	960 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-3	3/26/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-3-DUP	3/26/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-3	8/20/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-3	3/22/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-3-DUP	3/22/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-3	10/26/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1	490 T J N		<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-3	10/26/2017	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
PDA-4																									
SW-SA2-GMCS-4	3/28/2013	<1	<1	<1	<1	<1	<5	<1		<10				<1	2500 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-4	5/28/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	3100 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-4	10/23/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	840 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-4-DUP	10/23/2014	<5	<1	<1	<1	<1	<5	<1	6 T J N	<10				<1	1400 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-4	3/26/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-4	8/20/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-4	3/22/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1	13 T J N		<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-4	10/26/2016	<5	<1	<1	<1	<1	<5	1.3		<10		1.6	4.6	<1	1000 T J N		<1		<1	<1	<1	<1	<1	<1	6.2
SW-SA2-GMCS-4	10/26/2017	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-4-DUP	10/26/2017	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
PDA-5																									
SW-SA2-GMCS-5	3/28/2013	<1	<1	<1	<1	<1	<5	<1		<10				<1	2300 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-5-DUP	3/28/2013	<1	<1	<1	<1	<1	<5	<1		<10				<1	980 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-5	5/28/2014	<5	<0.16	<1	<1	<1	<5	<1		<10				<1	720 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-5	10/23/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	2200 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-5	3/26/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-5	8/20/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-5	3/22/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-5	10/26/2016	<5	<1	<1	<1	<1	<5	1.2		<10		1.4	4.2	<1	450 T J N		<1		<1	<1	<1	<1	<1	<1	5.6
SW-SA2-GMCS-5	10/26/2017	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
PDA-9																									
SW-SA2-GMCS-9	3/28/2013	<1	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-9	5/28/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1	3200 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-9-Dup	5/28/2014	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-9	10/23/2014	<5	<1	<1	<1	<1	<5	<1		<10	5.9 T J N			<1	930 T J N		<1		<1	<1	<1	<1	<1	<1	<2
SW-SA2-GMCS-9	3/26/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-9	8/20/2015	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-9	3/22/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-9	10/26/2016	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1	4.9 J B	<1	<1	<1	<1	<1	<1	<1
SW-SA2-GMCS-9	10/26/2017	<5	<1	<1	<1	<1	<5	<1		<10				<1			<1		<1	<1	<1	<1	<1	<1	<1

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

		SVOCs																				
Sample ID	Sample Date	1,2,4-Trichlorobenzene (ug/L)	1,2-Dichlorobenzene (ug/L)	1,3-Dichlorobenzene (ug/L)	1,4-Dichlorobenzene (ug/L)	1,4-Dioxane (ug/L)	1H-Benzotriazole, 4-methyl- (ug/L)	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	2,4,5-Trichlorophenol (ug/L)	2,4,6-Trichlorophenol (ug/L)	2,4-Dichlorophenol (ug/L)	2,4-Dimethylphenol (ug/L)	2,4-Dinitrophenol (ug/L)	2,4-Dinitrotoluene (ug/L)	2,6-Dinitrotoluene (ug/L)	2-Chloronaphthalene (ug/L)	2-Chlorophenol (ug/L)	2-Fluoro-4-nitrophenol (ug/L)	2-Methylnaphthalene (ug/L)	2-Methylphenol (o-Cresol) (ug/L)	2-Nitroaniline (ug/L)	2-Nitrophenol (ug/L)	3 & 4 Methylphenol (ug/L)
PDA-2																							
SW-SA2-GMCS-2	3/28/2013	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2	5/28/2014	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2	10/23/2014	<10	<10	<10	<10			<10	<10	<10	<10	<10	<51	<10	<10	<10	<10		<10	<10	<51	<10	<10
SW-SA2-GMCS-2	3/26/2015	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<48	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<48	<9.5	<9.5
SW-SA2-GMCS-2	8/20/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2-DUP	8/20/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2	3/22/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2	10/26/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2-DUP	10/26/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-2	10/26/2017	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<49	<9.7	<9.7	<9.7	<9.7		<9.7	<9.7	<49	<9.7	<9.7
PDA-3																							
SW-SA2-GMCS-3	3/28/2013	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-3	5/28/2014	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<49	<9.7	<9.7	<9.7	<9.7		<9.7	<9.7	<49	<9.7	<9.7
SW-SA2-GMCS-3	10/23/2014	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-3	3/26/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-3-DUP	3/26/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-3	8/20/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-3	3/22/2016	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<48	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<48	<9.5	<9.5
SW-SA2-GMCS-3-DUP	3/22/2016	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<48	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<48	<9.5	<9.5
SW-SA2-GMCS-3	10/26/2016	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<49	<9.7	<9.7	<9.7	<9.7		<9.7	<9.7	<49	<9.7	<9.7
SW-SA2-GMCS-3	10/26/2017	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
PDA-4																							
SW-SA2-GMCS-4	3/28/2013	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<47	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<47	<9.5	<9.5
SW-SA2-GMCS-4	5/28/2014	<10	<10	<10	<10			<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	4.8 T J N	<10	<10	<50	<10	<10
SW-SA2-GMCS-4	10/23/2014	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<47	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<47	<9.5	<9.5
SW-SA2-GMCS-4-DUP	10/23/2014	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-4	3/26/2015	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<48	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<48	<9.5	<9.5
SW-SA2-GMCS-4	8/20/2015	<9.9	<9.9	<9.9	<9.9			<9.9	<9.9	<9.9	<9.9	<9.9	<50	<9.9	<9.9	<9.9	<9.9		<9.9	<9.9	<50	<9.9	<9.9
SW-SA2-GMCS-4	3/22/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-4	10/26/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-4	10/26/2017	<9.8	<9.8	<9.8	<9.8			<9.8	<9.8	<9.8	<9.8	<9.8	<49	<9.8	<9.8	<9.8	<9.8		<9.8	<9.8	<49	<9.8	<9.8
SW-SA2-GMCS-4-DUP	10/26/2017	<9.8	<9.8	<9.8	<9.8			<9.8	<9.8	<9.8	<9.8	<9.8	<49	<9.8	<9.8	<9.8	<9.8		<9.8	<9.8	<49	<9.8	<9.8
PDA-5																							
SW-SA2-GMCS-5	3/28/2013	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<47	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<47	<9.5	<9.5
SW-SA2-GMCS-5-DUP	3/28/2013	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-5	5/28/2014	<10	<10	<10	<10			<10	<10	<10	<10	<10	<51	<10	<10	<10	<10		<10	<10	<51	<10	<10
SW-SA2-GMCS-5	10/23/2014	<9.9	<9.9	<9.9	<9.9			<9.9	<9.9	<9.9	<9.9	<9.9	<50	<9.9	<9.9	<9.9	<9.9		<9.9	<9.9	<50	<9.9	<9.9
SW-SA2-GMCS-5	3/26/2015	<10	<10	<10	<10	5 J F1		<10	<10	<10	<10	<10	<50	<10	<10	<10	<10		<10	<10	<50	<10	<10
SW-SA2-GMCS-5	8/20/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-5	3/22/2016	<9.9	<9.9	<9.9	<9.9		140 T J N	<9.9	<9.9	<9.9	<9.9	<9.9	<49	<9.9	<9.9	<9.9	<9.9		<9.9	<9.9	<49	<9.9	<9.9
SW-SA2-GMCS-5	10/26/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-5	10/26/2017	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<49	<9.7	<9.7	<9.7	<9.7		<9.7	<9.7	<49	<9.7	<9.7
PDA-9																							
SW-SA2-GMCS-9	3/28/2013	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-9	5/28/2014	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<48	<9.7	<9.7	<9.7	<9.7		<9.7	<9.7	<48	<9.7	<9.7
SW-SA2-GMCS-9-Dup	5/28/2014	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<48	<9.7	<9.7	<9.7	<9.7	4.1 T J N	<9.7	<9.7	<48	<9.7	<9.7
SW-SA2-GMCS-9	10/23/2014	<9.5	<9.5	<9.5	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<48	<9.5	<9.5	<9.5	<9.5		<9.5	<9.5	<48	<9.5	<9.5
SW-SA2-GMCS-9	3/26/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-9	8/20/2015	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-9	3/22/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-9	10/26/2016	<9.6	<9.6	<9.6	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<48	<9.6	<9.6	<9.6	<9.6		<9.6	<9.6	<48	<9.6	<9.6
SW-SA2-GMCS-9	10/26/2017	<9.7	<9.7	<9.7	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<49	<9.7	<9.7	<9.7	<9.7		<9.7	<9.7	<49	<9.7	<9.7

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

		SVOCs																					
Sample ID	Sample Date	3,3'-Dichlorobenzidine (ug/L)	3-Hexanol, 4-methyl- (ug/L)	3-Nitroaniline (ug/L)	4,6-Dinitro-2-methylphenol (ug/L)	4-Bromophenyl Phenyl Ether (ug/L)	4-Chloro-3-methylphenol (ug/L)	4-Chlorophenyl Phenyl Ether (ug/L)	4-Nitrophenol (ug/L)	Acenaphthene (ug/L)	Acenaphthylene (ug/L)	Aldol condensation product (ug/L)	Anthracene (ug/L)	Benzo(a)anthracene (ug/L)	Benzo(a)pyrene (ug/L)	Benzo(b)fluoranthene (ug/L)	Benzo(g,h,i)perylene (ug/L)	Benzo(k)fluoranthene (ug/L)	Benzyl Butyl Phthalate (ug/L)	bis(2-Chloroethoxy)methane (ug/L)	bis(2-Chloroethyl)ether (ug/L)	bis(2-Ethylhexyl)phthalate (ug/L)	Carbazole (ug/L)
PDA-2																							
SW-SA2-GMCS-2	3/28/2013	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	5/28/2014	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	10/23/2014	<61		<51	<51	<10	<10	<10	<51	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	2.6 J	<10
SW-SA2-GMCS-2	3/26/2015	<57		<48	<48	<9.5	<9.5	<9.5	<48	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-2	8/20/2015	<57		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2-DUP	8/20/2015	<57		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	3/22/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	10/26/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2-DUP	10/26/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	10/26/2017	<58		<49	<49	<9.7	<9.7	<9.7	<49	<9.7	<9.7		<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
PDA-3																							
SW-SA2-GMCS-3	3/28/2013	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	5/28/2014	<58		<49	<49	<9.7	<9.7	<9.7	<49	<9.7	<9.7		<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-3	10/23/2014	<57		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	3/26/2015	<57		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3-DUP	3/26/2015	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	8/20/2015	<57		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	3/22/2016	<57		<48	<48	<9.5	<9.5	<9.5	<48	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-3-DUP	3/22/2016	<57		<48	<48	<9.5	<9.5	<9.5	<48	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-3	10/26/2016	<58		<49	<49	<9.7	<9.7	<9.7	<49	<9.7	<9.7		<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-3	10/26/2017	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
PDA-4																							
SW-SA2-GMCS-4	3/28/2013	<57		<47	<47	<9.5	<9.5	<9.5	<47	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-4	5/28/2014	<60		<50	<50	<10	<10	<10	<50	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
SW-SA2-GMCS-4	10/23/2014	<57		<47	<47	<9.5	<9.5	<9.5	<47	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-4-DUP	10/23/2014	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6	6.7 T J A	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-4	3/26/2015	<57		<48	<48	<9.5	<9.5	<9.5	<48	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	2.2 J	<9.5
SW-SA2-GMCS-4	8/20/2015	<60		<50	<50	<9.9	<9.9	<9.9	<50	<9.9	<9.9		<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SW-SA2-GMCS-4	3/22/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-4	10/26/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-4	10/26/2017	<59		<49	<49	<9.8	<9.8	<9.8	<49	<9.8	<9.8		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
SW-SA2-GMCS-4-DUP	10/26/2017	<59		<49	<49	<9.8	<9.8	<9.8	<49	<9.8	<9.8		<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
PDA-5																							
SW-SA2-GMCS-5	3/28/2013	<57		<47	<47	<9.5	<9.5	<9.5	<47	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-5-DUP	3/28/2013	<57		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-5	5/28/2014	<62		<51	<51	<10	<10	<10	<51	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<3.6	<10
SW-SA2-GMCS-5	10/23/2014	<60		<50	<50	<9.9	<9.9	<9.9	<50	<9.9	<9.9	6.1 T J A	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SW-SA2-GMCS-5	3/26/2015	<60		<50	<50	<10	<10	<10	<50	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
SW-SA2-GMCS-5	8/20/2015	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-5	3/22/2016	<59		<49	<49	<9.9	<9.9	<9.9	<49	<9.9	<9.9		<9.9	<9.9	<9.9	<9.9	0.9 J	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SW-SA2-GMCS-5	10/26/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-5	10/26/2017	<58		<49	<49	<9.7	<9.7	<9.7	<49	<9.7	<9.7		<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
PDA-9																							
SW-SA2-GMCS-9	3/28/2013	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	5/28/2014	<58	5.8 T J N	<48	<48	<9.7	<9.7	<9.7	<48	<9.7	<9.7		<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-9-Dup	5/28/2014	<58		<48	<48	<9.7	<9.7	<9.7	<48	<9.7	<9.7	7.3 T A J	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-9	10/23/2014	<57		<48	<48	<9.5	<9.5	<9.5	<48	<9.5	<9.5		<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-9	3/26/2015	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	8/20/2015	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	3.1 J	<9.6
SW-SA2-GMCS-9	3/22/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	10/26/2016	<58		<48	<48	<9.6	<9.6	<9.6	<48	<9.6	<9.6		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	10/26/2017	<58		<49	<49	<9.7	<9.7	<9.7	<49	<9.7	<9.7		<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7

Sauget Area 2
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		SVOCs																				
Sample ID	Sample Date	Chrysene (ug/L)	Cyclohexane (ug/L)	Cyclohexanone (ug/L)	Dibenzo(a,h)anthracene (ug/L)	Dibenzofuran (ug/L)	Diethyl Phthalate (ug/L)	Dimethyl Phthalate (ug/L)	Di-n-butylphthalate (ug/L)	Di-n-octylphthalate (ug/L)	Dinoseb (ug/L)	Fluoranthene (ug/L)	Fluorene (ug/L)	Hexachlorobenzene (ug/L)	Hexachlorobutadiene (ug/L)	Hexachlorocyclopentadiene (ug/L)	Hexachloroethane (ug/L)	Indeno(1,2,3-cd)pyrene (ug/L)	Isophorone (ug/L)	Naphthalene (ug/L)	Nitrobenzene (ug/L)	N-Nitroso-di-n-propylamine (ug/L)	N-Nitrosodiphenylamine (ug/L)
PDA-2																							
SW-SA2-GMCS-2	3/28/2013	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	5/28/2014	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	10/23/2014	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
SW-SA2-GMCS-2	3/26/2015	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-2	8/20/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2-DUP	8/20/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	3/22/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	10/26/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2-DUP	10/26/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-2	10/26/2017	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
PDA-3																							
SW-SA2-GMCS-3	3/28/2013	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	5/28/2014	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-3	10/23/2014	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	3/26/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3-DUP	3/26/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	8/20/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-3	3/22/2016	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	1.7 J	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-3-DUP	3/22/2016	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-3	10/26/2016	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-3	10/26/2017	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
PDA-4																							
SW-SA2-GMCS-4	3/28/2013	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-4	5/28/2014	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
SW-SA2-GMCS-4	10/23/2014	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-4-DUP	10/23/2014	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-4	3/26/2015	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-4	8/20/2015	<9.9			<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SW-SA2-GMCS-4	3/22/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-4	10/26/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-4	10/26/2017	<9.8			<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
SW-SA2-GMCS-4-DUP	10/26/2017	<9.8			<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8
PDA-5																							
SW-SA2-GMCS-5	3/28/2013	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-5-DUP	3/28/2013	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-5	5/28/2014	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
SW-SA2-GMCS-5	10/23/2014	<9.9			<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SW-SA2-GMCS-5	3/26/2015	<10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
SW-SA2-GMCS-5	8/20/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-5	3/22/2016	<9.9		82 T J N	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9	<9.9
SW-SA2-GMCS-5	10/26/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-5	10/26/2017	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
PDA-9																							
SW-SA2-GMCS-9	3/28/2013	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	5/28/2014	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-9-Dup	5/28/2014	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7
SW-SA2-GMCS-9	10/23/2014	<9.5			<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5
SW-SA2-GMCS-9	3/26/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	8/20/2015	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	3/22/2016	<9.6	41 T J N		<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	10/26/2016	<9.6			<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6
SW-SA2-GMCS-9	10/26/2017	<9.7			<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7	<9.7

Sauget Area 2
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		SVOCs											
Sample ID	Sample Date	P-Chloroaniline (ug/L)	Phenanthrene (ug/L)	Phenol (ug/L)	Phenol, 2-fluoro-4-nitro-, acetate(ester (ug/L)	Phenylmercaptan (ug/L)	Phosgene oxime (ug/L)	P-Nitroaniline (ug/L)	p-Quinone (ug/L)	Pyrene (ug/L)	Sulfur - Cyclic octaatomic (ug/L)	Sulfur (ug/L)	Unknown Aldol Condensate (ug/L)
PDA-2													
SW-SA2-GMCS-2	3/28/2013	<19	<9.6	<9.6				<48		<9.6			22 T A J
SW-SA2-GMCS-2	5/28/2014	<19	<9.6	<9.6				<48		<9.6	7.3 T J N		
SW-SA2-GMCS-2	10/23/2014	<20	<10	<10				<51		<10	8.5 T J N		
SW-SA2-GMCS-2	3/26/2015	<19	<9.5	<9.5				<48		<9.5			
SW-SA2-GMCS-2	8/20/2015	<19	<9.6	<9.6				<48		<9.6	33 T J N		
SW-SA2-GMCS-2-DUP	8/20/2015	<19	<9.6	<9.6				<48		<9.6	67 T J N	6.7 T J N	
SW-SA2-GMCS-2	3/22/2016	<19	<9.6	<9.6				<48		<9.6	50 T J N	6.5 T J N	
SW-SA2-GMCS-2	10/26/2016	<19	<9.6	<9.6				<48		<9.6	13 T J N	7.4 T J N	
SW-SA2-GMCS-2-DUP	10/26/2016	<19	<9.6	<9.6				<48		<9.6	4.7 T J N		
SW-SA2-GMCS-2	10/26/2017	<19	<9.7	<9.7				<49		<9.7	8.8 T J N		
PDA-3													
SW-SA2-GMCS-3	3/28/2013	<19	<9.6	<9.6				<48		<9.6			
SW-SA2-GMCS-3	5/28/2014	<19	<9.7	<9.7				<49		<9.7	6.8 T J N		
SW-SA2-GMCS-3	10/23/2014	<19	<9.6	<9.6				<48		<9.6	20 T J N		
SW-SA2-GMCS-3	3/26/2015	<19	<9.6	<9.6				<48		<9.6			
SW-SA2-GMCS-3-DUP	3/26/2015	<19	<9.6	<9.6				<48		<9.6			
SW-SA2-GMCS-3	8/20/2015	<19	<9.6	<9.6				<48		<9.6	18 T J N		
SW-SA2-GMCS-3	3/22/2016	<19	<9.5	<9.5				<48		<9.5		5.7 T J N	
SW-SA2-GMCS-3-DUP	3/22/2016	<19	<9.5	<9.5				<48		<9.5	35 T J N	4 T J N	
SW-SA2-GMCS-3	10/26/2016	<19	<9.7	<9.7				<49		<9.7	7.9 T J N	5.9 T J N	
SW-SA2-GMCS-3	10/26/2017	<19	<9.6	<9.6				<48		<9.6	5.8 T J N		
PDA-4													
SW-SA2-GMCS-4	3/28/2013	<19	<9.5	<9.5				<47		<9.5			4.1 T A J
SW-SA2-GMCS-4	5/28/2014	<20	<10	<10				<50		<10			
SW-SA2-GMCS-4	10/23/2014	<19	<9.5	<9.5				<47		<9.5	15 T J N		
SW-SA2-GMCS-4-DUP	10/23/2014	<19	<9.6	<9.6				<48		<9.6	24 T J N		
SW-SA2-GMCS-4	3/26/2015	<19	<9.5	<9.5				<48		<9.5			
SW-SA2-GMCS-4	8/20/2015	<20	<9.9	<9.9				<50		<9.9	10 T J N		
SW-SA2-GMCS-4	3/22/2016	<19	<9.6	<9.6				<48		<9.6	60 T J N	12 T J N	
SW-SA2-GMCS-4	10/26/2016	<19	<9.6	<9.6				<48		<9.6	5.3 T J N		
SW-SA2-GMCS-4	10/26/2017	<20	<9.8	<9.8				<49		<9.8	7.9 T J N		
SW-SA2-GMCS-4-DUP	10/26/2017	<20	<9.8	<9.8				<49		<9.8	10 T J N		
PDA-5													
SW-SA2-GMCS-5	3/28/2013	<19	<9.5	<9.5				<47		<9.5			30 T A J
SW-SA2-GMCS-5-DUP	3/28/2013	<19	<9.6	<9.6				<48		<9.6			5.2 T A J
SW-SA2-GMCS-5	5/28/2014	<21	<10	<10				<51		<10	4.9 T J N		
SW-SA2-GMCS-5	10/23/2014	<20	<9.9	<9.9				<50		<9.9	4.7 T J N		
SW-SA2-GMCS-5	3/26/2015	<20	<10	<10				<50		<10			
SW-SA2-GMCS-5	8/20/2015	<19	<9.6	<9.6				<48		<9.6	85 T J N	7.4 T J N	
SW-SA2-GMCS-5	3/22/2016	<20	<9.9	<9.9				<49		<9.9			
SW-SA2-GMCS-5	10/26/2016	<19	<9.6	<9.6				<48		<9.6	7.1 T J N	5.1 T J N	
SW-SA2-GMCS-5	10/26/2017	<19	<9.7	<9.7				<49		<9.7	12 T J N		
PDA-9													
SW-SA2-GMCS-9	3/28/2013	<19	<9.6	<9.6				<48		<9.6			4.4 T A J
SW-SA2-GMCS-9	5/28/2014	<19	<9.7	<9.7	4.1 T J N			<48		<9.7	13 T J N		
SW-SA2-GMCS-9-Dup	5/28/2014	<19	<9.7	<9.7			5.3 T J N	<48		<9.7	26 T J N		
SW-SA2-GMCS-9	10/23/2014	<19	<9.5	<9.5				<48		<9.5	14 T J N		
SW-SA2-GMCS-9	3/26/2015	<19	<9.6	<9.6				<48		<9.6			
SW-SA2-GMCS-9	8/20/2015	<19	<9.6	<9.6				<48		<9.6	90 T J N	8 T J N	
SW-SA2-GMCS-9	3/22/2016	<19	<9.6	<9.6				<48		<9.6	15 T J N		
SW-SA2-GMCS-9	10/26/2016	<19	<9.6	<9.6				<48		<9.6	7.3 T J N		
SW-SA2-GMCS-9	10/26/2017	<19	<9.7	<9.7				<49		<9.7	8.2 T J N		

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

		Pesticides																					
Sample ID	Sample Date	4,4'-DDD (ug/L)	4,4'-DDE (ug/L)	4,4'-DDT (ug/L)	Aldrin (ug/L)	alpha-BHC (ug/L)	alpha-Chlordane (ug/L)	beta-BHC (ug/L)	Chlordane (ug/L)	delta-BHC (ug/L)	Dieldrin (ug/L)	Endosulfan I (ug/L)	Endosulfan II (ug/L)	Endosulfan Sulfate (ug/L)	Endrin (ug/L)	Endrin Aldehyde (ug/L)	Endrin Ketone (ug/L)	gamma-BHC (Lindane) (ug/L)	gamma-Chlordane (ug/L)	Heptachlor (ug/L)	Heptachlor Epoxide (ug/L)	Methoxychlor (ug/L)	Toxaphene (ug/L)
PDA-2																							
SW-SA2-GMCS-2	3/28/2013	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2	5/28/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2	10/23/2014	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.51	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051		<0.051	<0.051	<0.051	<5.1
SW-SA2-GMCS-2	3/26/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2	8/20/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2-DUP	8/20/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2	3/22/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2	10/26/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2-DUP	10/26/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-2	10/26/2017	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
PDA-3																							
SW-SA2-GMCS-3	3/28/2013	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	5/28/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	10/23/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	3/26/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3-DUP	3/26/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	8/20/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	3/22/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3-DUP	3/22/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	10/26/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-3	10/26/2017	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9
PDA-4																							
SW-SA2-GMCS-4	3/28/2013	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4	5/28/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4	10/23/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4-DUP	10/23/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4	3/26/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4	8/20/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4	3/22/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4	10/26/2016	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9
SW-SA2-GMCS-4	10/26/2017	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-4-DUP	10/26/2017	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
PDA-5																							
SW-SA2-GMCS-5	3/28/2013	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5-DUP	3/28/2013	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5	5/28/2014	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9
SW-SA2-GMCS-5	10/23/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5	3/26/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5	8/20/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5	3/22/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5	10/26/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-5	10/26/2017	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9
PDA-9																							
SW-SA2-GMCS-9	3/28/2013	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<4.9
SW-SA2-GMCS-9	5/28/2014	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9
SW-SA2-GMCS-9-Dup	5/28/2014	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9
SW-SA2-GMCS-9	10/23/2014	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-9	3/26/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-9	8/20/2015	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-9	3/22/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-9	10/26/2016	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048		<0.048	<0.048	<0.048	<4.8
SW-SA2-GMCS-9	10/26/2017	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.49	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049		<0.049	<0.049	<0.049	<4.9

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

Sample ID	Sample Date	Herbicides										
		2,4,5-T (ug/L)	2,4,5-TP (Silvex) (ug/L)	2,4-D (ug/L)	2,4-DB (ug/L)	Dalapon (ug/L)	Dicamba (ug/L)	Dichlorprop (ug/L)	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid) (ug/L)	MCPP (ug/L)	Pentachlorophenol (ug/L)	Aluminum (Dissolved) (mg/L)
PDA-2												
SW-SA2-GMCS-2	3/28/2013	<0.48	<0.48	<0.48	<0.48	<9.7	<0.48	<0.48	<120	<120	<0.24	0.41
SW-SA2-GMCS-2	5/28/2014	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-2	10/23/2014	<0.26	<0.26	<0.21	<0.52	<5.2	<0.52	<0.52	<130	<130	<0.26	<0.2
SW-SA2-GMCS-2	3/26/2015	<0.24	<0.24	0.092 J p J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-2	8/20/2015	<0.24	<0.24	0.085 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-2-DUP	8/20/2015	<0.24	<0.24	0.087 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-2	3/22/2016	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-2	10/26/2016	<0.24	<0.24	0.14 J	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-2-DUP	10/26/2016	<0.24	<0.24	0.15 J	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-2	10/26/2017	<0.24	<0.24	<0.49	<0.49	<4.9	<0.49	<0.49	<120	<120	<0.24	<0.2
PDA-3												
SW-SA2-GMCS-3	3/28/2013	<0.48	<0.48	<0.48	<0.48	<9.6	<0.48	<0.48	<120	<120	<0.24	0.37
SW-SA2-GMCS-3	5/28/2014	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-3	10/23/2014	<0.24	<0.24	1.1 B * J	<0.48	<4.8	0.24 J	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-3	3/26/2015	<0.24	<0.24	0.084 J p	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-3-DUP	3/26/2015	<0.24	<0.24	0.077 J p	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-3	8/20/2015	<0.24	<0.24	0.096 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-3	3/22/2016	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-3-DUP	3/22/2016	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-3	10/26/2016	<0.24	<0.24	0.17 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-3	10/26/2017	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
PDA-4												
SW-SA2-GMCS-4	3/28/2013	<0.48	<0.48	<0.48	<0.48	<9.6	<0.48	<0.48	<120	<120	<0.24	0.27
SW-SA2-GMCS-4	5/28/2014	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-4	10/23/2014	<0.24	<0.24	0.45 J B * J	<0.48	<4.8	0.14 J	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-4-DUP	10/23/2014	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-4	3/26/2015	<0.24	<0.24	0.1 J p	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-4	8/20/2015	<0.24	<0.24	0.1 J	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-4	3/22/2016	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-4	10/26/2016	<0.24	<0.24	0.19 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-4	10/26/2017	<0.24	<0.24	0.058 J	<0.49	<4.9	<0.49	<0.49	<120	<120	<0.24	<0.2
SW-SA2-GMCS-4-DUP	10/26/2017	<0.24	<0.24	0.042 J p	<0.49	<4.9	<0.49	<0.49	<120	<120	<0.24	<0.2
PDA-5												
SW-SA2-GMCS-5	3/28/2013	<0.48	<0.48	<0.48	<0.48	<9.6	<0.48	<0.48	<110	<110	<0.24	0.24
SW-SA2-GMCS-5-DUP	3/28/2013	<0.48	<0.48	<0.48	<0.48	<9.6	<0.48	<0.48	<120	<120	<0.24	0.36
SW-SA2-GMCS-5	5/28/2014	<0.25	<0.25	<0.49	<0.49	<4.9	<0.49	<0.49	<120	<120	<0.25	<0.2
SW-SA2-GMCS-5	10/23/2014	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-5	3/26/2015	<0.24	<0.24	0.089 J p J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-5	8/20/2015	<0.24	<0.24	0.1 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-5	3/22/2016	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-5	10/26/2016	<0.24	<0.24	0.38 J	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-5	10/26/2017	<0.24	<0.24	0.091 J	<0.49	<4.9	<0.49	<0.49	<120	<120	<0.24	<0.2
PDA-9												
SW-SA2-GMCS-9	3/28/2013	<0.48	<0.48	<0.48	<0.48	<9.6	<0.48	<0.48	<110	<110	<0.24	0.26
SW-SA2-GMCS-9	5/28/2014	<0.25	<0.25	<0.51	<0.51	<5.1	<0.51	<0.51	<120	<120	<0.25	<0.2
SW-SA2-GMCS-9-Dup	5/28/2014	<0.25	<0.25	<0.5	<0.5	<5	<0.5	<0.5	<120	<120	<0.25	<0.2
SW-SA2-GMCS-9	10/23/2014	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-9	3/26/2015	<0.24	<0.24	0.097 J p	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-9	8/20/2015	<0.24	<0.24	0.12 J	<0.48	<4.8	<0.48	<0.48	<120	<120	<0.24	<0.2
SW-SA2-GMCS-9	3/22/2016	<0.24	<0.24	<0.48	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-9	10/26/2016	<0.24	<0.24	0.41 J	<0.48	<4.8	<0.48	<0.48	<110	<110	<0.24	<0.2
SW-SA2-GMCS-9	10/26/2017	<0.24	<0.24	0.036 J p	<0.49	<4.9	<0.49	<0.49	<120	<120	<0.24	<0.2

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

Sample ID	Sample Date	Metals																						
		Aluminum (mg/L)	Antimony (Dissolved) (mg/L)	Antimony (mg/L)	Arsenic (Dissolved) (mg/L)	Arsenic (mg/L)	Barium (Dissolved) (mg/L)	Barium (mg/L)	Beryllium (Dissolved) (mg/L)	Beryllium (mg/L)	Cadmium (Dissolved) (mg/L)	Cadmium (mg/L)	Calcium (Dissolved) (mg/L)	Calcium (mg/L)	Chromium (Dissolved) (mg/L)	Chromium (mg/L)	Cobalt (Dissolved) (mg/L)	Cobalt (mg/L)	Copper (Dissolved) (mg/L)	Copper (mg/L)	Iron (Dissolved) (mg/L)	Iron (mg/L)	Lead (Dissolved) (mg/L)	Lead (mg/L)	Magnesium (Dissolved) (mg/L)
PDA-2																								
SW-SA2-GMCS-2	3/28/2013	0.48	<0.02	<0.02	<0.02	<0.02	0.057	0.074	<0.004	0.00023 J	<0.005	<0.005	46	50	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.43	1.1 B	<0.01	<0.01	18
SW-SA2-GMCS-2	5/28/2014	2.1	<0.02	<0.02	<0.02	<0.02	0.05	0.07	<0.004	<0.004	<0.005	<0.005	43	43	<0.01	0.0032 J	<0.01	<0.01	<0.02	<0.02	0.027 J	2.6	<0.01	<0.01	16
SW-SA2-GMCS-2	10/23/2014	0.56	<0.02	<0.02	<0.02	<0.02	0.06	0.078	<0.004	<0.004	<0.005	<0.005	50	51	<0.01	<0.01	<0.01	0.0012 J	<0.02	<0.02	<0.05	0.98	<0.01	0.0035 J	20
SW-SA2-GMCS-2	3/26/2015	2.3	<0.02	<0.02	<0.02	<0.02	0.051	0.072	<0.004	<0.004	<0.005	<0.005	56	57	<0.01	0.0029 J	<0.01	0.0011 J	<0.02	<0.02	0.028 J	2.4	<0.01	<0.01	21
SW-SA2-GMCS-2	8/20/2015	0.57	<0.01	<0.01	<0.01	<0.01	0.061 J B	0.087 J	<0.004	0.00024 J	<0.005	<0.005	41	42	<0.005	<0.005	<0.05	0.0013 J	0.0024 J	0.0041 J	<0.1	0.96	<0.01	0.0041 J	16
SW-SA2-GMCS-2-DUP	8/20/2015	0.79	<0.01	<0.01	<0.01	<0.01	0.07 J	0.086 J	<0.004	<0.004	<0.005	<0.005	39	42	<0.005	0.0014 J	<0.05	0.0013 J	0.0026 J	0.0043 J	<0.1	1.1	<0.01	0.0027 J	18
SW-SA2-GMCS-2	3/22/2016	4.6	<0.02	<0.02	<0.02	<0.02	0.059	0.096	<0.004	0.00016 J	<0.005	<0.005	63	65	<0.01	0.0068 J	<0.01	0.0015 J	<0.02	0.0042 J	<0.05	4.5 B	<0.01	0.004 J	24
SW-SA2-GMCS-2	10/26/2016	3.1 J	<0.02	<0.02	<0.02	<0.02	0.065	0.12 J	<0.004	0.00013 J	<0.005	<0.005	66	75 J	<0.01	0.0045 J	<0.01	0.0014 J J	<0.02	0.0028 J	<0.05	3.6 J	<0.01	0.0054 J J	24
SW-SA2-GMCS-2-DUP	10/26/2016	14 J	<0.02	<0.02	<0.02	0.0094 J	0.065	0.4 J	<0.004	0.0012 J	<0.005	<0.005	65	140 J	<0.01	0.018	<0.01	0.026 J	<0.02	0.014 J	<0.05	22 J	<0.01	0.033 J	24
SW-SA2-GMCS-2	10/26/2017	4.9	<0.02	<0.02	<0.015	<0.015	0.053	0.097	<0.002	<0.002	<0.002	<0.002	45	48	<0.004	0.0076	<0.004	0.0018 J	0.0016 J	0.0049 J	<0.05	5.6	<0.01	0.0072 J	20
PDA-3																									
SW-SA2-GMCS-3	3/28/2013	0.45	<0.02	<0.02	<0.02	<0.02	0.057	0.071	<0.004	<0.004	<0.005	<0.005	46	49	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.36	0.88 B	<0.01	<0.01	18
SW-SA2-GMCS-3	5/28/2014	2.2	<0.02	<0.02	<0.02	<0.02	0.05	0.074	<0.004	<0.004	<0.005	<0.005	43	45	<0.01	0.0032 J	<0.01	0.0011 J	<0.02	<0.02	<0.05	2.7	<0.01	<0.01	16
SW-SA2-GMCS-3	10/23/2014	0.44	<0.02	<0.02	<0.02	<0.02	0.06	0.078	<0.004	<0.004	<0.005	<0.005	50	52	<0.01	<0.01	<0.01	0.001 J	<0.02	<0.02	<0.05	0.88	<0.01	0.0036 J	21
SW-SA2-GMCS-3	3/26/2015	2.1	<0.02	<0.02	<0.02	<0.02	0.052	0.07	<0.004	<0.004	<0.005	<0.005	56	57	<0.01	0.0026 J	<0.01	<0.01	<0.02	<0.02	0.031 J	2.2	<0.01	<0.01	21
SW-SA2-GMCS-3-DUP	3/26/2015	2.2	<0.02	<0.02	<0.02	<0.02	0.051	0.07	<0.004	<0.004	<0.005	<0.005	56	57	<0.01	0.0027 J	<0.01	<0.01	<0.02	<0.02	0.028 J	2.3	<0.01	<0.01	21
SW-SA2-GMCS-3	8/20/2015	1.5	<0.01	<0.01	<0.01	<0.01	0.062 J B	0.091 J	<0.004	<0.004	<0.005	<0.005	41	43	<0.005	0.0022 J	<0.05	0.0012 J	0.0026 J	0.0044 J	<0.1	1.7	<0.01	0.0036 J	16
SW-SA2-GMCS-3	3/22/2016	4.8	<0.02	<0.02	<0.02	<0.02	0.059	0.099	<0.004	0.00015 J	<0.005	<0.005	64	66	<0.01	0.0065 J	<0.01	0.0017 J	<0.02	0.0044 J	<0.05	4.8 B	<0.01	0.0039 J	24
SW-SA2-GMCS-3-DUP	3/22/2016	4.6	<0.02	<0.02	<0.02	<0.02	0.059	0.098	<0.004	0.00015 J	<0.005	<0.005	64	65	<0.01	0.0063 J	<0.01	0.0017 J	<0.02	0.0045 J	<0.05	4.6 B	<0.01	0.0041 J	24
SW-SA2-GMCS-3	10/26/2016	2.7	<0.02	<0.02	<0.02	<0.02	0.068	0.097	<0.004	<0.004	<0.005	<0.005	68	74	<0.01	0.0037 J	<0.01	<0.01	<0.02	0.0029 J	<0.05	2.8	<0.01	<0.01	25
SW-SA2-GMCS-3	10/26/2017	4.5	<0.02	<0.02	<0.015	<0.015	0.055	0.095	<0.002	<0.002	<0.002	<0.002	47	48	<0.004	0.0064	<0.004	0.0017 J	<0.01	0.0044 J	<0.05	4.9	<0.01	0.0073 J	21
PDA-4																									
SW-SA2-GMCS-4	3/28/2013	0.43	<0.02	<0.02	<0.02	<0.02	0.06	0.072	<0.004	<0.004	<0.005	<0.005	49	49	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.27	0.88 B	<0.01	<0.01	19
SW-SA2-GMCS-4	5/28/2014	2.4	<0.02	<0.02	<0.02	<0.02	0.051	0.073	<0.004	<0.004	<0.005	<0.005	44 J	43 J	<0.01	0.0034 J	<0.01	0.0013 J	<0.02	<0.02	0.028 J	3	<0.01	<0.01	16
SW-SA2-GMCS-4	10/23/2014	0.42	<0.02	<0.02	<0.02	<0.02	0.06	0.078	<0.004	<0.004	<0.005	<0.005	51	51	<0.01	<0.01	<0.01	0.0012 J	<0.02	<0.02	<0.05	0.87 J	<0.01	<0.01	21
SW-SA2-GMCS-4-DUP	10/23/2014	0.56	<0.02	<0.02	<0.02	<0.02	0.061	0.082	<0.004	<0.004	<0.005	<0.005	52	55	<0.01	<0.01	<0.01	0.0012 J	<0.02	<0.02	<0.05	1.1 J	<0.01	0.0049 J	21
SW-SA2-GMCS-4	3/26/2015	2.1	<0.02	<0.02	<0.02	<0.02	0.051	0.07	<0.004	<0.004	<0.005	<0.005	56	58	<0.01	0.0025 J	<0.01	<0.01	<0.02	<0.02	0.026 J	2.2	<0.01	<0.01	21
SW-SA2-GMCS-4	8/20/2015	2.3 F1 F2 J	<0.01	<0.01	<0.01	<0.01	0.062 J B	0.09 J	<0.004	<0.004	<0.005	<0.005	41	41	<0.005	0.0025 J	<0.05	0.0014 J	0.0022 J	0.0048 J	<0.1	2.3 F1 F2 J	<0.01	0.0033 J	17
SW-SA2-GMCS-4	3/22/2016	4.9	<0.02	<0.02	<0.02	<0.02	0.06	0.1	<0.004	0.00015 J	<0.005	<0.005	63	65	<0.01	0.0066 J	<0.01	0.0021 J	<0.02	0.0046 J	<0.05	4.8 B	<0.01	<0.01	24
SW-SA2-GMCS-4	10/26/2016	2.7	<0.02	<0.02	<0.02	<0.02	0.068	0.093	<0.004	<0.004	<0.005	<0.005	69	70	<0.01	0.0034 J	<0.01	<0.01	<0.02	0.0025 J	<0.05	2.6	<0.01	<0.01	25
SW-SA2-GMCS-4	10/26/2017	5.1	<0.02	<0.02	<0.015	<0.015	0.054	0.095	<0.002	0.00034 J	<0.002	<0.002	47	47	0.0077 J	0.0069 J	<0.004	0.0018 J	0.0017 J	0.0044 J	0.057	5.6	<0.01	0.0065 J	21
SW-SA2-GMCS-4-DUP	10/26/2017	4.5	<0.02	<0.02	<0.015	<0.015	0.054	0.096	<0.002	<0.002	<0.002	<0.002	47	48	<0.004	0.0065	<0.004	0.0015 J	<0.01	0.0032 J	<0.05	4.7	<0.01	0.0065 J	21
PDA-5																									
SW-SA2-GMCS-5	3/28/2013	0.46	<0.02	<0.02	<0.02	<0.02	0.059	0.073	<0.004	<0.004	<0.005	<0.005	49	50	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.24	0.99 B	<0.01	<0.01	19
SW-SA2-GMCS-5-DUP	3/28/2013	0.46	<0.02	<0.02	<0.02	<0.02	0.06	0.073	<0.004	<0.004	<0.005	<0.005	48	50	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.39	0.94 B	<0.01	<0.01	19
SW-SA2-GMCS-5	5/28/2014	2.3	<0.02	<0.02	<0.02	<0.02	0.048	0.072	<0.004	<0.004	<0.005	<0.005	41	43 J	<0.01	0.0033 J	<0.01	<0.01	<0.02	<0.02	<0.05	2.7	<0.01	<0.01	15
SW-SA2-GMCS-5	10/23/2014	1.4	<0.02	<0.02	<0.02	<0.02	0.059	0.083	<0.004	<0.004	<0.005	<0.005	50	52	<0.01	0.0022 J	<0.01	0.0016 J	<0.02	<0.02	<0.05	1.9	<0.01	0.0035 J	20
SW-SA2-GMCS-5	3/26/2015	2.6	<0.02	<0.02	<0.02	<0.02	0.051	0.074	<0.004	<0.004	<0.005	<0.005	55	58	<0.01	0.0032 J	<0.01	0.0011 J	<0.02	<0.02	0.03 J	2.5	<0.01	<0.01	21
SW-SA2-GMCS-5	8/20/2015	2.3	<0.01	<0.01	<0.01	<0.01	0.071 J	0.094 J	<0.00016	<0.004	<0.005	<0.005	40	43	<0.005	0.0031 J	0.00057 J	0.0014 J	0.0026 J	0.0053 J	<0.1	2.4	<0.01	0.003 J	18 J
SW-SA2-GMCS-5	3/22/2016	4.8	<0.02	<0.02	<0.02	<0.02	0.058	0.099	<0.004	0.00017 J	<0.005	<0.005	63	66	<0.01	0.0064 J	<0.01	0.0018 J	<0.02	0.0052 J	<0.05	4.6 B	<0.01	<0.01	24
SW-SA2-GMCS-5	10/26/2016	2.7	<0.02	<0.02	<0.02	<0.02	0.067	0.098	<0.004	<0.004	<0.005	<0.005	67	74	<0.01	0.0035 J	<0.01	0.0011 J	0.0036 J	0.003 J	<0.05	2.7	<0.01	<0.01	24
SW-SA2-GMCS-5	10/26/2017	5.6	<0.02	<0.02	<0.015	<0.015	0.054	0.1	<0.002	<0.002	<0.002	<0.002	46	49	<0.004	0.0081	<0.004	0.0019 J	0.002 J	0.0052 J	<0.05	5.9	<0.01	0.0066 J	21
PDA-9																									
SW-SA2-GMCS-9	3/28/2013	0.77	<0.02	<0.02	<0.02	<0.02	0.059	0.082	<0.004	<0.004	<0.005	<0.005	47	48 J	<0.01	<0.01	<0.01	0.0017 J	<0.02	<0.02	0.26	2.3 B J	<0.01	0.0043 J	18
SW-SA2-GMCS-9	5/28/2014	2.3	<0.02	<0.02	<0.02	<0.02	0.05	0.072	<0.004	<0.004	<0.005	<0.005	43	43	<0.01	0.0035 J	<0.01	0.0012 J	<0.02	<0.02	<0.05	2.8	<0.01	<0.01	16
SW-SA2-GMCS-9-Dup	5/28/2014	2.3	<0.02	<0.02	<0.02	<0.02	0.047	0.07	<0.004	<0.004	<0.005	<0.005	41	42	<0.01	0.0033 J	<0.01	0.0016 J	<0.02	<0.02	0.027 J	2.8	<0.01	<0.01	15
SW-SA2-GMCS-9	10/23/2014	0.46	<0.02	<0.02	<0.02	<0.02	0.06	0.078	<0.004	<0.004	<0.005	<0.005	50	52	<0.01	<0.01	<0.01	0.0012 J	<0.02	<0.02	0.025 J	0.86	<0.01	<0.01	21
SW-SA2-GMCS-9	3/26/2015	2.4	<0.02	<0.02	<0.02	<0.02	0.051	0.071	<0.004	<0.004	<0.005	<0.005	56	56	<0.01	0.0031 J	<0.01	<0.01	<0.02	<0.02	0.032 J	2.5	<0.01	<0.01	21
SW-SA2-GMCS-9	8/20/2015	3	<0.01	<0.01	<0.01	<0.01	0.069 J	0.094 J	<0.004	0.00016 J	<0.005	<0.005	39	42	<0.005	0.0037 J	<0.05	0.0017 J	0.0068 J J	0.005 J J	<0.1	2.9	<0.01	0.0036 J	18 J
SW-SA2-GMCS-9	3/22/2016	4.1	<0.02	<0.02	<0.02	<0.02	0.059	0.092	<0.004	0.00012 J	<0.005	<0.005	63	65	<0.01	0.0055 J	<0.01	0.0016 J	<0.02	0.0038 J	<0.05	4 B	<0.01	<0.01	24
SW-SA2-GMCS-9	10/26/2016	2.7	<0.02	<0.02	<0.02	<0.02	0.068	0.093	<0.004	<0.004	<0.005	<0.005	68	70	<0.01	0.0035 J	<0.01	0.001 J	<0.02	0.0028 J	<0.05	2.7	<0.01	0.0046 J	25
SW-SA2-GMCS-9	10/26/2017	5.4	<0.02	<0.02	<0.015	<0.015	0.054	0.098	<0.002	<0.002	<0.002	<0.002	46	48	<0.004	0.0076	<0.004	0.0016 J	<0.01	0.0044 J	<0.05	5.6	<0.01	0.0082 J	20

Sauget Area 2
Groundwater Migration Control System
2013 through 2017 Sampling Event
Surface Water Sample Analytical Results

		Metals																			
Sample ID	Sample Date	Magnesium (mg/L)	Manganese (Dissolved) (mg/L)	Manganese (mg/L)	Mercury (Dissolved) (mg/L)	Mercury (mg/L)	Nickel (Dissolved) (mg/L)	Nickel (mg/L)	Potassium (Dissolved) (mg/L)	Potassium (mg/L)	Selenium (Dissolved) (mg/L)	Selenium (mg/L)	Silver (Dissolved) (mg/L)	Silver (mg/L)	Sodium (Dissolved) (mg/L)	Sodium (mg/L)	Thallium (Dissolved) (mg/L)	Thallium (mg/L)	Vanadium (Dissolved) (mg/L)	Vanadium (mg/L)	Zinc (Dissolved) (mg/L)	Zinc (mg/L)
PDA-2																						
SW-SA2-GMCS-2	3/28/2013	19	0.021	0.14		<0.0002	<0.04	<0.04	4.2	4.6	<0.02	<0.02	<0.01	<0.01	33	35	<0.025	<0.025	<0.01	<0.01	<0.02	0.012 J
SW-SA2-GMCS-2	5/28/2014	16	<0.01	0.17		<0.0002	<0.04	0.0052 J	2.8	3.2	<0.02	<0.02	<0.01	<0.01	20 J	19 J	<0.025	<0.025	<0.01	0.0064 J	<0.02	0.013 J
SW-SA2-GMCS-2	10/23/2014	21	<0.01	0.16		<0.0002	<0.04	<0.04	4.2	4.3	<0.02	<0.02	<0.01	<0.01	17	17	<0.025	<0.025	<0.01	0.0032 J	<0.02	0.009 J
SW-SA2-GMCS-2	3/26/2015	21	0.0042 J	0.12		<0.0002	<0.04	0.0044 J	5.1	5.6	0.0065 J	0.0081 J	<0.01	<0.01	34	35	<0.025	<0.025	<0.01	0.0053 J	<0.02	0.016 J
SW-SA2-GMCS-2	8/20/2015	17	0.0034 J	0.21	<0.0002	<0.0002	0.0015 J	0.0029 J	3.7 J B J	3.2 J J	0.0027 J ^ J	<0.0028	<0.005	<0.005	16 J	15 J	<0.02	0.0014 J	<0.05	0.0071 J	0.0037 J	0.0053 J
SW-SA2-GMCS-2-DUP	8/20/2015	17	0.0029 J	0.21	<0.0002	<0.0002	0.0013 J	0.0028 J	3.5 J B J	3.2 J J	0.0038 J ^ J	<0.0028	<0.005	<0.005	17 J	15 J	<0.02	0.0014 J	0.0049 J	0.0076 J	0.0043 J	0.022
SW-SA2-GMCS-2	3/22/2016	25	<0.01	0.19		<0.0002	0.0031 J	0.0074 J	2.9	4	<0.02	<0.02	<0.01	<0.00064	28	28	<0.025	<0.025	0.0012 J	0.01	<0.02	0.018 J
SW-SA2-GMCS-2	10/26/2016	28 J	0.0062 J	0.21 J		<0.0002	0.0032 J	0.0064 J	3.9	4.8	<0.02	<0.02	<0.01	<0.01	14	15	<0.025	<0.025	0.0024 J	0.0094 J	<0.02	0.015 J
SW-SA2-GMCS-2-DUP	10/26/2016	44 J	0.0058 J	1.5 J		<0.0002	0.003 J	0.047	3.9	8.1	<0.02	<0.02	<0.01	<0.01	14	16	<0.025	<0.025	0.0025 J	0.038	<0.02	0.12
SW-SA2-GMCS-2	10/26/2017	21	0.00042 J	0.23 B		<0.0002	<0.01	0.0064 J	3.4	4.6	<0.025	<0.025	<0.006	<0.006	19	19	<0.02	<0.02	0.0024 J	0.013	0.0027 J	0.024
PDA-3																						
SW-SA2-GMCS-3	3/28/2013	18	0.016	0.13		<0.0002	<0.04	<0.04	4.3	4.4	<0.02	<0.02	<0.01	<0.01	34	34	<0.025	<0.025	<0.01	<0.01	<0.02	0.011 J
SW-SA2-GMCS-3	5/28/2014	17	<0.01	0.18		<0.0002	<0.04	0.0053 J	2.9	3.4	0.0067 J	0.0076 J	<0.01	<0.01	20	20	<0.025	<0.025	<0.01	0.0066 J	<0.02	0.013 J
SW-SA2-GMCS-3	10/23/2014	21	<0.01	0.16		<0.0002	<0.04	0.004 J	4.3	4.4	<0.02	<0.02	<0.01	<0.01	17	17	<0.025	<0.025	<0.01	0.0031 J	<0.02	0.009 J
SW-SA2-GMCS-3	3/26/2015	21	0.0037 J	0.11		<0.0002	<0.04	0.0043 J	5.2	5.6	<0.02	0.0078 J	<0.01	<0.01	35	35	<0.025	<0.025	<0.01	0.0049 J	<0.02	0.014 J
SW-SA2-GMCS-3-DUP	3/26/2015	21	0.0036 J	0.11		0.000096 J	<0.04	<0.04	5.2	5.6	0.0082 J	<0.02	<0.01	<0.01	35 J	34 J	<0.025	<0.025	<0.01	0.005 J	<0.02	0.015 J
SW-SA2-GMCS-3	8/20/2015	17	0.0024 J	0.21	<0.0002	<0.0002	0.0016 J	0.0035 J	3.8 J B J	3.5 J J	0.0025 J ^ J	<0.0027	<0.005	<0.005	16	16	<0.0022	<0.02	<0.05	0.0089 J	<0.02	0.018 J
SW-SA2-GMCS-3	3/22/2016	25	<0.01	0.2		<0.0002	0.0032 J	0.0073 J	3	4.1	<0.02	<0.02	<0.00067	<0.01	28	28	<0.025	<0.025	0.0012 J	0.011	<0.02	0.019 J
SW-SA2-GMCS-3-DUP	3/22/2016	25	<0.01	0.19		<0.0002	0.0029 J	0.0073 J	2.9	4	<0.02	<0.02	<0.00067	<0.01	28	28	<0.025	<0.025	0.0013 J	0.01	<0.02	0.019 J
SW-SA2-GMCS-3	10/26/2016	27	0.0053 J	0.17		<0.0002	0.0023 J	0.0063 J	4.1	5	<0.02	<0.02	<0.01	<0.01	15	16	<0.025	<0.025	0.0024 J	0.0082 J	<0.02	0.013 J
SW-SA2-GMCS-3	10/26/2017	21	0.00054 J	0.22 B		<0.0002	<0.01	0.0059 J	3.5	4.5	<0.025	<0.025	<0.006	<0.006	20 J	19 J	<0.02	<0.02	0.0023 J	0.012	<0.01	0.021
PDA-4																						
SW-SA2-GMCS-4	3/28/2013	19	0.013	0.14		<0.0002	<0.04	<0.04	4.5	4.5	<0.02	<0.02	<0.01	<0.01	36	35	<0.025	<0.025	<0.01	<0.01	<0.02	0.011 J
SW-SA2-GMCS-4	5/28/2014	16	<0.01	0.18		<0.0002	<0.04	0.0058 J	3	3.2	0.007 J J	<0.02	<0.01	<0.01	20 J	19 J	<0.025	<0.025	<0.01	0.0068 J	<0.02	0.013 J
SW-SA2-GMCS-4	10/23/2014	21	<0.01	0.16		<0.0002	<0.04	<0.04	4.3	4.3	<0.02	<0.02	<0.01	<0.01	17	17	<0.025	<0.025	<0.01	<0.01	<0.02	0.01 J
SW-SA2-GMCS-4-DUP	10/23/2014	22	<0.01	0.17		<0.0002	<0.04	0.005 J	4.1	4.3	0.0071 J	<0.02	<0.01	<0.01	17	17	<0.025	<0.025	<0.01	0.0032 J	<0.02	0.01 J
SW-SA2-GMCS-4	3/26/2015	21	0.0031 J	0.11		<0.0002	<0.04	<0.04	5.2	5.6	0.0081 J	<0.02	<0.01	<0.01	35	35	<0.025	<0.025	<0.01	0.0048 J	<0.02	0.013 J
SW-SA2-GMCS-4	8/20/2015	17	0.0017 J	0.2	<0.0002	<0.0002	0.0014 J	0.0035 J	3.7 J B J	3.5 J J	<0.01	<0.0037	<0.005	<0.005	16 J	15 J	<0.0021	<0.02	0.0063 J	0.0095 J	<0.02	0.03
SW-SA2-GMCS-4	3/22/2016	25	<0.01	0.2		<0.0002	0.0024 J	0.0075 J	3	4.1	<0.02	<0.02	<0.01	<0.01	27	27	<0.025	<0.025	0.001 J	0.011	<0.02	0.019 J
SW-SA2-GMCS-4	10/26/2016	25	0.0058 J	0.15		<0.0002	0.0029 J	0.0052 J	4.1	4.7	<0.02	<0.02	<0.01	<0.01	15	15	<0.025	<0.025	0.0024 J	0.0076 J	<0.02	0.012 J
SW-SA2-GMCS-4	10/26/2017	21	0.0014 J	0.22 B		<0.0002	<0.01	0.0068 J	3.5	4.5	<0.025	<0.025	<0.006	<0.006	20 J	19 J	<0.02	<0.02	0.0021 J	0.013	<0.01	0.022
SW-SA2-GMCS-4-DUP	10/26/2017	21	0.00064 J	0.22 B		<0.0002	<0.01	0.0059 J	3.5	4.6	<0.025	<0.025	<0.006	<0.006	20	20	<0.02	<0.02	0.0024 J	0.012	<0.01	0.02
PDA-5																						
SW-SA2-GMCS-5	3/28/2013	19	0.011	0.15		<0.0002	<0.04	<0.04	4.5	4.4	<0.02	<0.02	<0.01	<0.01	36	36	<0.025	<0.025	<0.01	<0.01	<0.02	0.011 J
SW-SA2-GMCS-5-DUP	3/28/2013	19	0.018	0.15		<0.0002	<0.04	<0.04	4.5	4.5	<0.02	<0.02	<0.01	<0.01	36	35	<0.025	<0.025	<0.01	<0.01	<0.02	0.0093 J
SW-SA2-GMCS-5	5/28/2014	16	<0.01	0.17		<0.0002	<0.04	0.0053 J	2.7	3.2	0.0065 J J	<0.02	<0.01	<0.01	20	20	<0.025	<0.025	<0.01	0.0066 J	<0.02	0.012 J
SW-SA2-GMCS-5	10/23/2014	21	<0.01	0.21		<0.0002	<0.04	0.0054 J	4.2	4.5	0.0089 J J	0.0064 J J	<0.01	<0.01	18	18	<0.025	<0.025	<0.01	0.0048 J	<0.02	0.015 J
SW-SA2-GMCS-5	3/26/2015	22	0.0046 J	0.12		<0.0002	<0.04	0.004 J	5.2	5.7	<0.02	0.0086 J	<0.01	<0.01	35 J	34 J	<0.025	<0.025	<0.01	0.0059 J	<0.02	0.015 J
SW-SA2-GMCS-5	8/20/2015	17 J	0.0024 J	0.21	<0.0002	<0.0002	0.0017 J	0.0037 J	3.7 J B	3.7 J	0.0036 J ^ J	<0.0029	<0.005	<0.005	18 J	16 J	<0.0028	<0.02	0.0055 J	0.0095 J	<0.02	0.032
SW-SA2-GMCS-5	3/22/2016	25	<0.01	0.19		<0.0002	0.0033 J	0.0076 J	2.9	4.1	<0.02	<0.02	<0.01	<0.00061	27	29	<0.025	<0.025	0.0011 J	0.011	<0.02	0.019 J
SW-SA2-GMCS-5	10/26/2016	27	0.0094 J	0.17		<0.0002	0.003 J	0.0045 J	4	4.9	<0.02	<0.02	<0.01	<0.01	15	16	<0.025	<0.025	0.0024 J	0.0076 J	<0.02	0.013 J
SW-SA2-GMCS-5	10/26/2017	21	0.00095 J	0.23 B		<0.0002	<0.01	0.007 J	3.4	4.9	<0.025	<0.025	<0.006	<0.006	20	21	<0.02	<0.02	0.0025 J	0.014	<0.01	0.024
PDA-9																						
SW-SA2-GMCS-9	3/28/2013	18 J	0.011	0.16		<0.0002	<0.04	0.004 J	4.4	4.4	<0.02	<0.02	<0.01	<0.01	32	32 J	<0.025	<0.025	<0.01	0.003 J	<0.02	0.013 J
SW-SA2-GMCS-9	5/28/2014	16	<0.01	0.17		<0.0002	<0.04	0.007 J	2.9	3.2	0.008 J J	<0.02	<0.01	<0.01	21 J	19 J	<0.025	<0.025	<0.01	0.0065 J	<0.02	0.013 J
SW-SA2-GMCS-9-Dup	5/28/2014	16	<0.01	0.17		<0.0002	<0.04	0.0059 J	2.7	3.2	0.0064 J J	<0.02	<0.01	<0.01	20	20	<0.025	<0.025	<0.01	0.0068 J	<0.02	0.014 J
SW-SA2-GMCS-9	10/23/2014	21	<0.01	0.15		<0.0002	<0.04	<0.04	4.2	4.3	<0.02	<0.02	<0.01	<0.01	17	17	<0.025	<0.025	<0.01	0.003 J	<0.02	0.0087 J
SW-SA2-GMCS-9	3/26/2015	21	0.0046 J	0.12		<0.0002	<0.04	<0.04	5.2	5.4	0.0071 J	<0.02	<0.01	<0.01	37 J	31 J	<0.025	<0.025	<0.01	0.0055 J	<0.02	0.013 J
SW-SA2-GMCS-9	8/20/2015	17 J	0.0019 J	0.2	<0.0002	<0.0002	0.0016 J	0.0039 J	3.6 J B	3.7 J	0.0027 J ^ J	<0.0028	<0.005	<0.005	17	18	<0.0022	0.0017 J	0.0061 J	0.0099 J	0.0052 J	0.03
SW-SA2-GMCS-9	3/22/2016	25	<0.01	0.17		<0.0002	0.0033 J	0.0066 J	2.9	3.9	<0.02	<0.02	<0.01	<0.00061	28	27	<0.025	<0.025	0.0011 J	0.0092 J	<0.02	0.016 J
SW-SA2-GMCS-9	10/26/2016	25	0.0059 J	0.16		<0.0002	0.0029 J	0.0052 J	4.1	4.8	<0.02	<0.02	<0.01	<0.01	15	15	<0.025	<0.025	0.0023 J	0.0077 J	<0.02	0.012 J
SW-SA2-GMCS-9	10/26/2017	21	0.00067 J	0.22 B		<0.0002	<0.01	0.0069 J	3.4	4.7	<0.025	<0.025	<0.006	<0.006	19	19	<0.02	<0.02	0.0024 J	0.013	<0.01	0.022

ATTACHMENT 2 - GMCS Performance Monitoring Data Table

Sauget Area 2 Groundwater Migration Control System
System Performance 2013 - 2018

2013 % Convergent	96.4%
2014 % Convergent	98.4%
2015 % Convergent	97.3%
2016 % Convergent	99.7%
2017 % Convergent	100.0%
2018 % Convergent (through 3/31)	100.0%

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
1/1/2013	375.41	848.62	299	290.2	8.8	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/2/2013	375.60	829.89	299	290.5	8.5	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/3/2013	375.98	796.53	299	290.1	8.9	Convergent	Yes	297	300.4	3.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/4/2013	376.15	791.91	299	289.9	9.1	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/5/2013	376.00	785.53	299	289.8	9.2	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/6/2013	375.96	812.55	299	289.9	9.1	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/7/2013	375.94	786.93	299	289.9	9.1	Convergent	Yes	297	300.4	3.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/8/2013	375.85	792.43	299	289.5	9.5	Convergent	Yes	297	300.4	3.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/9/2013	376.25	791.76	299	289.5	9.5	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/10/2013	376.85	700.40	299	289.1	9.9	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/11/2013	377.16	696.67	299	288.2	10.8	Convergent	Yes	297	300.2	3.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/12/2013	376.96	710.31	299	287.2	11.8	Convergent	Yes	297	299.2	2.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/13/2013	377.34	649.99	299	287.0	12.0	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/14/2013	377.47	610.66	299	286.8	12.2	Convergent	Yes	297	297.5	0.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/15/2013	377.91	556.22	299	285.5	13.5	Convergent	Yes	297	297.7	0.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/16/2013	378.09	557.27	299	285.7	13.3	Convergent	Yes	297	299.0	2.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/17/2013	377.81	571.01	299	285.8	13.2	Convergent	Yes	297	298.2	1.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/18/2013	377.45	558.28	299	285.5	13.5	Convergent	Yes	297	297.6	0.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/19/2013	376.83	662.25	299	286.5	12.5	Convergent	Yes	297	298.7	1.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/20/2013	376.83	662.77	299	287.0	12.0	Convergent	Yes	297	299.0	2.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/21/2013	377.06	657.60	299	286.8	12.2	Convergent	Yes	297	298.9	1.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/22/2013	376.75	654.56	299	287.0	12.0	Convergent	Yes	297	298.9	1.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/23/2013	375.85	709.48	299	287.6	11.4	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/24/2013	375.63	769.59	299	288.7	10.3	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/25/2013	375.57	766.95	299	289.3	9.7	Convergent	Yes	297	300.4	3.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/26/2013	375.77	780.79	299	289.6	9.4	Convergent	Yes	297	300.4	3.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/27/2013	376.16	717.55	299	289.3	9.7	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/28/2013	376.28	725.78	299	288.7	10.3	Convergent	Yes	297	299.8	2.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/29/2013	373.59	677.80	299	288.2	10.8	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/30/2013	357.79	532.16	299	286.4	12.6	Convergent	Yes	297	298.0	1.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/31/2013	357.80	261.20	299	281.4	17.6	Convergent	Yes	297	286.3	-10.7	Divergent	No	**No**	6.88	**Convergent**	1	0
2/1/2013	357.80	239.01	299	276.5	22.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/2/2013	357.80	207.59	299	275.6	23.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/3/2013	357.80	246.56	299	275.7	23.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/4/2013	357.80	243.29	299	273.8	25.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/5/2013	367.78	234.98	299	273.4	25.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/6/2013	381.72	244.27	299	273.4	25.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/7/2013	381.19	253.22	299	274.2	24.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/8/2013	380.71	277.08	299	275.3	23.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/9/2013	380.55	276.68	299	276.4	22.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/10/2013	381.43	258.46	299	276.0	23.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/11/2013	382.37	231.43	299	274.6	24.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/12/2013	382.40	246.18	299	272.5	26.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/13/2013	383.88	200.77	299	270.4	28.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/14/2013	384.66	200.95	299	266.6	32.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/15/2013	384.86	182.78	299	263.8	35.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/16/2013	384.05	159.78	299	262.3	36.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/17/2013	383.20	192.52	299	263.8	35.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/18/2013	382.49	221.79	299	268.1	30.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/19/2013	382.47	229.85	299	270.4	28.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/20/2013	380.84	277.00	299	272.9	26.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/21/2013	380.23	360.20	299	276.6	22.4	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/22/2013	379.76	463.18	299	279.4	19.6	Convergent	Yes	297	299.6	2.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/23/2013	379.40	493.70	299	280.8	18.2	Convergent	Yes	297	299.0	2.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/24/2013	379.12	527.11	299	281.7	17.3	Convergent	Yes	297	300.2	3.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/25/2013	379.49	517.32	299	281.9	17.1	Convergent	Yes	297	300.2	3.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/26/2013	381.17	371.24	299	280.8	18.2	Convergent	Yes	297	297.1	0.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/27/2013	382.68	237.77	299	277.5	21.5	Convergent	Yes	297	246.2	-50.8	Divergent	No	**No**	-29.34	**Divergent**	0	1
2/28/2013	382.42	241.13	299	274.9	24.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/1/2013	381.97	255.46	299	275.4	23.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/2/2013	382.16	264.77	299	275.7	23.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/3/2013	381.56	268.06	299	275.3	23.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/4/2013	381.31	309.20	299	276.9	22.1	Convergent	Yes	297	246.2	-50.8	Divergent	No	**No**	-28.71	**Divergent**	0	1
3/5/2013	381.78	283.80	299	277.5	21.5	Convergent	Yes	297	273.5	-23.5	Divergent	No	**No**	-2.03	**Divergent**	0	1
3/6/2013	381.37	309.82	299	277.5	21.5	Convergent	Yes	297	230.8	-66.2	Divergent	No	**No**	-44.73	**Divergent**	0	1
3/7/2013	380.30	441.49	299	278.8	20.2	Convergent	Yes	297	281.3	-15.7	Divergent	No	**No**	4.50	**Convergent**	1	0
3/8/2013	381.45	361.63	299	279.5	19.5	Convergent	Yes	297	281.9	-15.1	Divergent	No	**No**	4.44	**Convergent**	1	0
3/9/2013	382.45	279.66	299	277.2	21.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/10/2013	386.51	222.37	299	270.9	28.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
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Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
3/11/2013	396.23	24.10	299	241.0	58.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/12/2013	402.49	2.79	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/13/2013	404.39	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/14/2013	403.89	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/15/2013	402.86	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/16/2013	401.80	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/17/2013	400.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/18/2013	400.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/19/2013	399.36	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/20/2013	398.63	2.90	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/21/2013	397.55	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/22/2013	395.84	2.85	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/23/2013	393.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/24/2013	392.61	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/25/2013	392.24	6.17	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/26/2013	390.20	67.69	299	223.8	75.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/27/2013	388.55	128.89	299	239.2	59.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/28/2013	389.07	122.11	299	246.0	53.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/29/2013	390.65	92.09	299	242.8	56.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/30/2013	482.37	208.00	299	238.0	61.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/31/2013	390.26	114.74	299	240.6	58.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/1/2013	389.65	144.75	299	247.2	51.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/2/2013	389.29	141.00	299	249.7	49.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/3/2013	390.27	129.40	299	249.2	49.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/4/2013	391.42	94.28	299	243.8	55.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/5/2013	392.16	70.47	299	236.4	62.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/6/2013	391.88	73.32	299	234.0	65.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/7/2013	392.35	59.24	299	234.2	64.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/8/2013	392.08	67.11	299	233.3	65.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/9/2013	391.89	96.43	299	237.2	61.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/10/2013	392.32	81.34	299	231.8	67.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/11/2013	395.09	22.83	299	219.6	79.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/12/2013	400.09	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/13/2013	402.72	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/14/2013	403.31	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/15/2013	402.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/16/2013	401.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/17/2013	403.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/18/2013	404.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/19/2013	407.51	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/20/2013	410.57	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/21/2013	412.44	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/22/2013	413.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/23/2013	414.24	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/24/2013	414.62	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/25/2013	414.62	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/26/2013	414.09	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/27/2013	413.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/28/2013	412.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/29/2013	412.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/30/2013	411.95	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/1/2013	411.31	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/2/2013	410.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/3/2013	409.96	2.89	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/4/2013	410.66	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/5/2013	410.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/6/2013	410.54	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/7/2013	410.84	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/8/2013	410.96	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/9/2013	410.44	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/10/2013	409.68	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/11/2013	408.95	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/12/2013	408.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/13/2013	407.62	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/14/2013	406.92	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/15/2013	406.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/16/2013	405.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/17/2013	405.46	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/18/2013	405.00	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
5/19/2013	404.48	8.84	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/20/2013	404.03	26.65	299	218.1	80.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/21/2013	404.81	10.90	299	219.2	79.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/22/2013	405.54	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/23/2013	405.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/24/2013	405.16	2.03	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/25/2013	403.92	33.07	299	218.2	80.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/26/2013	402.50	80.24	299	231.0	68.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/27/2013	401.44	113.89	299	240.3	58.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/28/2013	402.05	121.73	299	244.1	54.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/29/2013	404.58	29.17	299	232.9	66.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/30/2013	407.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/31/2013	409.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/1/2013	413.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/2/2013	416.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/3/2013	418.73	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/4/2013	419.41	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/5/2013	419.31	2.85	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/6/2013	418.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/7/2013	417.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/8/2013	415.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/9/2013	414.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/10/2013	413.24	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/11/2013	412.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/12/2013	411.46	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/13/2013	410.76	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/14/2013	410.20	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/15/2013	409.49	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/16/2013	408.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/17/2013	408.17	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/18/2013	408.30	3.77	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/19/2013	408.43	6.34	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/20/2013	408.23	9.09	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/21/2013	407.43	8.80	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/22/2013	406.18	39.94	299	219.6	79.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/23/2013	405.14	86.07	299	230.5	68.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/24/2013	404.47	156.26	299	240.0	59.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/25/2013	403.41	195.82	299	248.7	50.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/26/2013	402.85	206.57	299	256.1	42.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/27/2013	402.30	235.20	299	259.1	39.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/28/2013	401.87	213.20	299	261.5	37.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/29/2013	401.86	200.27	299	262.3	36.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/30/2013	402.25	184.77	299	261.1	37.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/1/2013	402.72	196.43	299	259.3	39.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/2/2013	403.22	160.09	299	256.8	42.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/3/2013	403.84	144.05	299	252.9	46.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/4/2013	404.01	161.09	299	252.4	46.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/5/2013	404.01	151.98	299	252.0	47.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/6/2013	403.97	143.74	299	251.4	47.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/7/2013	403.79	149.30	299	252.4	46.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/8/2013	403.38	154.74	299	254.3	44.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/9/2013	402.89	174.70	299	257.0	42.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/10/2013	402.30	200.78	299	260.3	38.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/11/2013	401.86	201.59	299	263.0	36.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/12/2013	401.42	211.25	299	264.2	34.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/13/2013	400.49	243.02	299	267.2	31.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/14/2013	399.18	300.62	299	271.4	27.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/15/2013	398.08	377.77	299	275.4	23.6	Convergent	Yes	297	331.6	34.6	Convergent	Yes	**Yes**		**Convergent**	1	0
7/16/2013	397.26	355.69	299	277.2	21.8	Convergent	Yes	297	306.8	9.8	Convergent	Yes	**Yes**		**Convergent**	1	0
7/17/2013	396.48	344.11	299	277.9	21.1	Convergent	Yes	297	292.3	-4.7	Divergent	No	**No**	16.47	**Convergent**	1	0
7/18/2013	395.70	530.20	299	280.2	18.8	Convergent	Yes	297	293.0	-4.0	Divergent	No	**No**	14.75	**Convergent**	1	0
7/19/2013	394.79	719.10	299	281.4	17.6	Convergent	Yes	297	296.8	-0.2	Divergent	No	**No**	17.47	**Convergent**	1	0
7/20/2013	393.73	801.99	299	280.7	18.3	Convergent	Yes	297	296.9	-0.1	Divergent	No	**No**	18.19	**Convergent**	1	0
7/21/2013	392.79	893.10	299	280.7	18.3	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	15.91	**Convergent**	1	0
7/22/2013	391.89	971.32	299	281.4	17.6	Convergent	Yes	297	293.8	-3.2	Divergent	No	**No**	14.43	**Convergent**	1	0
7/23/2013	391.00	1090.78	299	283.1	15.9	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	13.07	**Convergent**	1	0
7/24/2013	389.79	1214.87	299	284.4	14.6	Convergent	Yes	297	293.6	-3.4	Divergent	No	**No**	11.20	**Convergent**	1	0
7/25/2013	388.88	1301.16	299	285.1	13.9	Convergent	Yes	297	293.3	-3.7	Divergent	No	**No**	10.24	**Convergent**	1	0
7/26/2013	388.94	1229.79	299	285.4	13.6	Convergent	Yes	297	291.4	-5.6	Divergent	No	**No**	8.06	**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
7/27/2013	388.56	1220.13	299	285.1	13.9	Convergent	Yes	297	290.7	-6.3	Divergent	No	**No**	7.57	**Convergent**	1	0
7/28/2013	387.13	1438.40	299	286.2	12.8	Convergent	Yes	297	292.6	-4.4	Divergent	No	**No**	8.45	**Convergent**	1	0
7/29/2013	386.35	1520.20	299	287.6	11.4	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	8.99	**Convergent**	1	0
7/30/2013	385.89	1553.05	299	288.3	10.7	Convergent	Yes	297	295.5	-1.5	Divergent	No	**No**	9.21	**Convergent**	1	0
7/31/2013	386.58	1370.36	299	287.6	11.4	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	8.57	**Convergent**	1	0
8/1/2013	386.13	1410.89	299	286.3	12.7	Convergent	Yes	297	292.8	-4.2	Divergent	No	**No**	8.44	**Convergent**	1	0
8/2/2013	383.65	1717.15	299	288.2	10.8	Convergent	Yes	297	294.3	-2.7	Divergent	No	**No**	8.14	**Convergent**	1	0
8/3/2013	383.80	1635.97	299	290.3	8.7	Convergent	Yes	297	295.9	-1.1	Divergent	No	**No**	7.58	**Convergent**	1	0
8/4/2013	384.33	1580.81	299	289.8	9.2	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	7.29	**Convergent**	1	0
8/5/2013	383.89	1570.27	299	288.7	10.3	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	7.35	**Convergent**	1	0
8/6/2013	383.97	1540.01	299	288.3	10.7	Convergent	Yes	297	293.4	-3.6	Divergent	No	**No**	7.11	**Convergent**	1	0
8/7/2013	384.53	1394.27	299	287.4	11.6	Convergent	Yes	297	291.9	-5.1	Divergent	No	**No**	6.51	**Convergent**	1	0
8/8/2013	387.65	954.96	299	284.2	14.8	Convergent	Yes	297	288.3	-8.7	Divergent	No	**No**	6.13	**Convergent**	1	0
8/9/2013	393.97	269.27	299	274.5	24.5	Convergent	Yes	297	245.0	-52.0	Divergent	No	**No**	-27.47	**Divergent**	0	1
8/10/2013	397.04	144.25	299	256.1	42.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/11/2013	396.52	137.06	299	245.2	53.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/12/2013	394.25	205.45	299	252.2	46.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/13/2013	391.63	438.66	299	267.8	31.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/14/2013	390.32	640.61	299	276.8	22.2	Convergent	Yes	297	298.0	1.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/15/2013	389.12	803.90	299	279.9	19.1	Convergent	Yes	297	297.3	0.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/16/2013	386.91	1086.44	299	283.2	15.8	Convergent	Yes	297	296.5	-0.5	Divergent	No	**No**	15.23	**Convergent**	1	0
8/17/2013	384.98	1372.73	299	286.6	12.4	Convergent	Yes	297	296.0	-1.0	Divergent	No	**No**	11.37	**Convergent**	1	0
8/18/2013	384.78	1376.48	299	288.0	11.0	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	8.85	**Convergent**	1	0
8/19/2013	384.59	1333.25	299	287.4	11.6	Convergent	Yes	297	293.4	-3.6	Divergent	No	**No**	8.00	**Convergent**	1	0
8/20/2013	384.13	1391.23	299	287.2	11.8	Convergent	Yes	297	292.9	-4.1	Divergent	No	**No**	7.72	**Convergent**	1	0
8/21/2013	384.20	1317.92	299	286.9	12.1	Convergent	Yes	297	292.5	-4.5	Divergent	No	**No**	7.60	**Convergent**	1	0
8/22/2013	383.93	1284.11	299	286.4	12.6	Convergent	Yes	297	291.8	-5.2	Divergent	No	**No**	7.41	**Convergent**	1	0
8/23/2013	383.50	1343.49	299	286.1	12.9	Convergent	Yes	297	291.7	-5.3	Divergent	No	**No**	7.62	**Convergent**	1	0
8/24/2013	384.15	1243.59	299	285.3	13.7	Convergent	Yes	297	291.3	-5.7	Divergent	No	**No**	8.00	**Convergent**	1	0
8/25/2013	383.83	1215.81	299	284.6	14.4	Convergent	Yes	297	290.4	-6.6	Divergent	No	**No**	7.84	**Convergent**	1	0
8/26/2013	383.22	1277.68	299	284.7	14.3	Convergent	Yes	297	290.3	-6.7	Divergent	No	**No**	7.60	**Convergent**	1	0
8/27/2013	382.76	1277.61	299	285.4	13.6	Convergent	Yes	297	291.0	-6.0	Divergent	No	**No**	7.62	**Convergent**	1	0
8/28/2013	382.00	1393.10	299	286.2	12.8	Convergent	Yes	297	291.6	-5.4	Divergent	No	**No**	7.38	**Convergent**	1	0
8/29/2013	381.15	1492.72	299	287.0	12.0	Convergent	Yes	297	292.5	-4.5	Divergent	No	**No**	7.53	**Convergent**	1	0
8/30/2013	380.31	1574.63	299	288.2	10.8	Convergent	Yes	297	293.0	-4.0	Divergent	No	**No**	6.75	**Convergent**	1	0
8/31/2013	380.41	1547.27	299	288.7	10.3	Convergent	Yes	297	292.9	-4.1	Divergent	No	**No**	6.27	**Convergent**	1	0
9/1/2013	380.47	1500.50	299	288.7	10.3	Convergent	Yes	297	293.0	-4.0	Divergent	No	**No**	6.32	**Convergent**	1	0
9/2/2013	380.87	1422.96	299	288.0	11.0	Convergent	Yes	297	292.7	-4.3	Divergent	No	**No**	6.70	**Convergent**	1	0
9/3/2013	380.59	1391.19	299	287.2	11.8	Convergent	Yes	297	292.6	-4.4	Divergent	No	**No**	7.43	**Convergent**	1	0
9/4/2013	379.83	1448.00	299	287.5	11.5	Convergent	Yes	297	291.8	-5.2	Divergent	No	**No**	6.33	**Convergent**	1	0
9/5/2013	379.48	1492.26	299	288.0	11.0	Convergent	Yes	297	292.1	-4.9	Divergent	No	**No**	6.08	**Convergent**	1	0
9/6/2013	379.33	1495.84	299	288.1	10.9	Convergent	Yes	297	292.4	-4.6	Divergent	No	**No**	6.35	**Convergent**	1	0
9/7/2013	379.53	1428.69	299	287.8	11.2	Convergent	Yes	297	292.1	-4.9	Divergent	No	**No**	6.30	**Convergent**	1	0
9/8/2013	379.82	1324.96	299	287.3	11.7	Convergent	Yes	297	291.1	-5.9	Divergent	No	**No**	5.81	**Convergent**	1	0
9/9/2013	380.17	1323.45	299	287.1	11.9	Convergent	Yes	297	290.8	-6.2	Divergent	No	**No**	5.70	**Convergent**	1	0
9/10/2013	380.22	1320.85	299	286.8	12.2	Convergent	Yes	297	291.8	-5.2	Divergent	No	**No**	7.05	**Convergent**	1	0
9/11/2013	379.55	1371.16	299	286.7	12.3	Convergent	Yes	297	292.0	-5.0	Divergent	No	**No**	7.30	**Convergent**	1	0
9/12/2013	379.37	1405.76	299	287.1	11.9	Convergent	Yes	297	292.4	-4.6	Divergent	No	**No**	7.38	**Convergent**	1	0
9/13/2013	379.81	1302.07	299	286.9	12.1	Convergent	Yes	297	292.0	-5.0	Divergent	No	**No**	7.11	**Convergent**	1	0
9/14/2013	380.16	1235.80	299	286.3	12.7	Convergent	Yes	297	291.0	-6.0	Divergent	No	**No**	6.74	**Convergent**	1	0
9/15/2013	380.07	1236.50	299	286.1	12.9	Convergent	Yes	297	290.6	-6.4	Divergent	No	**No**	6.50	**Convergent**	1	0
9/16/2013	379.60	1269.81	299	286.3	12.7	Convergent	Yes	297	290.3	-6.7	Divergent	No	**No**	6.04	**Convergent**	1	0
9/17/2013	378.92	1336.85	299	286.9	12.1	Convergent	Yes	297	291.7	-5.3	Divergent	No	**No**	6.78	**Convergent**	1	0
9/18/2013	379.40	1294.88	299	287.0	12.0	Convergent	Yes	297	292.6	-4.4	Divergent	No	**No**	7.64	**Convergent**	1	0
9/19/2013	379.56	1246.15	299	286.6	12.4	Convergent	Yes	297	291.4	-5.6	Divergent	No	**No**	6.74	**Convergent**	1	0
9/20/2013	379.67	1213.21	299	286.2	12.8	Convergent	Yes	297	291.3	-5.7	Divergent	No	**No**	7.04	**Convergent**	1	0
9/21/2013	379.84	1200.15	299	285.7	13.3	Convergent	Yes	297	291.7	-5.3	Divergent	No	**No**	7.98	**Convergent**	1	0
9/22/2013	380.21	1136.95	299	285.6	13.4	Convergent	Yes	297	291.9	-5.1	Divergent	No	**No**	8.39	**Convergent**	1	0
9/23/2013	380.14	1116.77	299	285.6	13.4	Convergent	Yes	297	291.5	-5.5	Divergent	No	**No**	7.83	**Convergent**	1	0
9/24/2013	380.09	1106.55	299	285.8	13.2	Convergent	Yes	297	291.3	-5.7	Divergent	No	**No**	7.53	**Convergent**	1	0
9/25/2013	380.11	1119.20	299	285.8	13.2	Convergent	Yes	297	291.5	-5.5	Divergent	No	**No**	7.62	**Convergent**	1	0
9/26/2013	379.81	1154.22	299	285.7	13.3	Convergent	Yes	297	292.2	-4.8	Divergent	No	**No**	8.53	**Convergent**	1	0
9/27/2013	379.51	1161.65	299	285.5	13.5	Convergent	Yes	297	292.8	-4.2	Divergent	No	**No**	9.32	**Convergent**	1	0
9/28/2013	379.28	1137.36	299	285.9	13.1	Convergent	Yes	297	292.1	-4.9	Divergent	No	**No**	8.13	**Convergent**	1	0
9/29/2013	379.21	1183.47	299	285.6	13.4	Convergent	Yes	297	291.7	-5.3	Divergent	No	**No**	8.05	**Convergent**	1	0
9/30/2013	378.81	1176.96	299	285.6	13.4	Convergent	Yes	297	292.4	-4.6	Divergent	No	**No**	8.78	**Convergent**	1	0
10/1/2013	378.59	1205.03	299	285.8	13.2	Convergent	Yes	297	291.4	-5.6	Divergent	No	**No**	7.57	**Convergent**	1	0
10/2/2013	378.42	1196.82	299	285.8	13.2	Convergent	Yes	297	291.6	-5.4	Divergent	No	**No**	7.80	**Convergent**	1	0
10/3/2013	378.32	1220.09	299	286.4	12.6	Convergent	Yes	297	292.0	-5.0	Divergent	No	**No**	7.57	**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
10/4/2013	378.30	1211.57	299	286.3	12.7	Convergent	Yes	297	292.4	-4.6	Divergent	No	**No**	8.14	**Convergent**	1	0
10/5/2013	378.53	1167.49	299	286.3	12.7	Convergent	Yes	297	292.1	-4.9	Divergent	No	**No**	7.83	**Convergent**	1	0
10/6/2013	379.37	1083.71	299	285.8	13.2	Convergent	Yes	297	290.7	-6.3	Divergent	No	**No**	6.91	**Convergent**	1	0
10/7/2013	380.06	975.52	299	284.3	14.7	Convergent	Yes	297	290.0	-7.0	Divergent	No	**No**	7.69	**Convergent**	1	0
10/8/2013	380.67	882.78	299	283.4	15.6	Convergent	Yes	297	290.9	-6.1	Divergent	No	**No**	9.50	**Convergent**	1	0
10/9/2013	380.50	897.53	299	283.4	15.6	Convergent	Yes	297	293.1	-3.9	Divergent	No	**No**	11.62	**Convergent**	1	0
10/10/2013	380.74	869.32	299	282.8	16.2	Convergent	Yes	297	293.4	-3.6	Divergent	No	**No**	12.67	**Convergent**	1	0
10/11/2013	381.05	827.21	299	281.9	17.1	Convergent	Yes	297	292.3	-4.7	Divergent	No	**No**	12.36	**Convergent**	1	0
10/12/2013	381.51	774.92	299	281.5	17.5	Convergent	Yes	297	292.2	-4.8	Divergent	No	**No**	12.68	**Convergent**	1	0
10/13/2013	381.66	735.04	299	280.9	18.1	Convergent	Yes	297	292.7	-4.3	Divergent	No	**No**	13.82	**Convergent**	1	0
10/14/2013	381.09	780.52	299	281.2	17.8	Convergent	Yes	297	293.7	-3.3	Divergent	No	**No**	14.45	**Convergent**	1	0
10/15/2013	380.49	865.97	299	282.7	16.3	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	13.40	**Convergent**	1	0
10/16/2013	380.15	896.20	299	283.6	15.4	Convergent	Yes	297	294.3	-2.7	Divergent	No	**No**	12.72	**Convergent**	1	0
10/17/2013	379.31	951.71	299	284.1	14.9	Convergent	Yes	297	293.5	-3.5	Divergent	No	**No**	11.38	**Convergent**	1	0
10/18/2013	379.02	995.65	299	284.6	14.4	Convergent	Yes	297	293.0	-4.0	Divergent	No	**No**	10.40	**Convergent**	1	0
10/19/2013	379.75	934.72	299	285.1	13.9	Convergent	Yes	297	291.7	-5.3	Divergent	No	**No**	8.61	**Convergent**	1	0
10/20/2013	379.90	922.27	299	284.4	14.6	Convergent	Yes	297	292.9	-4.1	Divergent	No	**No**	10.51	**Convergent**	1	0
10/21/2013	380.21	890.84	299	283.9	15.1	Convergent	Yes	297	293.5	-3.5	Divergent	No	**No**	11.54	**Convergent**	1	0
10/22/2013	381.01	779.30	299	283.4	15.6	Convergent	Yes	297	293.1	-3.9	Divergent	No	**No**	11.63	**Convergent**	1	0
10/23/2013	381.99	664.34	299	281.8	17.2	Convergent	Yes	297	292.4	-4.6	Divergent	No	**No**	12.63	**Convergent**	1	0
10/24/2013	382.11	606.03	299	280.4	18.6	Convergent	Yes	297	293.9	-3.1	Divergent	No	**No**	15.49	**Convergent**	1	0
10/25/2013	381.61	633.42	299	281.1	17.9	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	15.53	**Convergent**	1	0
10/26/2013	380.36	790.45	299	282.7	16.3	Convergent	Yes	297	296.5	-0.5	Divergent	No	**No**	15.86	**Convergent**	1	0
10/27/2013	380.08	830.83	299	283.8	15.2	Convergent	Yes	297	295.4	-1.6	Divergent	No	**No**	13.62	**Convergent**	1	0
10/28/2013	380.51	763.97	299	283.2	15.8	Convergent	Yes	297	293.3	-3.7	Divergent	No	**No**	12.07	**Convergent**	1	0
10/29/2013	380.76	708.93	299	282.9	16.1	Convergent	Yes	297	293.6	-3.4	Divergent	No	**No**	12.67	**Convergent**	1	0
10/30/2013	380.87	713.15	299	282.9	16.1	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	14.09	**Convergent**	1	0
10/31/2013	381.11	699.59	299	283.4	15.6	Convergent	Yes	297	295.5	-1.5	Divergent	No	**No**	14.10	**Convergent**	1	0
11/1/2013	382.09	611.88	299	282.3	16.7	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	14.51	**Convergent**	1	0
11/2/2013	382.57	541.46	299	280.5	18.5	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	16.39	**Convergent**	1	0
11/3/2013	382.27	511.48	299	279.9	19.1	Convergent	Yes	297	295.6	-1.4	Divergent	No	**No**	17.76	**Convergent**	1	0
11/4/2013	381.73	645.20	299	280.4	18.6	Convergent	Yes	297	297.2	0.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/5/2013	382.26	615.90	299	280.4	18.6	Convergent	Yes	297	295.9	-1.1	Divergent	No	**No**	17.50	**Convergent**	1	0
11/6/2013	382.41	541.98	299	279.7	19.3	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	17.23	**Convergent**	1	0
11/7/2013	382.08	569.25	299	279.6	19.4	Convergent	Yes	297	296.1	-0.9	Divergent	No	**No**	18.49	**Convergent**	1	0
11/8/2013	382.26	625.36	299	279.8	19.2	Convergent	Yes	297	297.2	0.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/9/2013	382.62	708.39	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/10/2013	382.88	719.84	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/11/2013	382.98	726.90	299	295.3	3.7	Convergent	Yes	297	309.8	12.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/12/2013	382.41	700.59	299	295.8	3.2	Convergent	Yes	297	309.1	12.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/13/2013	382.49	821.00	299	297.7	1.3	Convergent	Yes	297	309.7	12.7	Convergent	Yes	**Yes**		**Convergent**	1	0
11/14/2013	382.45	834.00	299	308.7	-9.7	Divergent	No	297	308.4	11.4	Convergent	Yes	**No**	1.61	**Convergent**	1	0
11/15/2013	382.93	845.00	299	294.6	4.4	Convergent	Yes	297	310.6	13.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/16/2013	382.28	845.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/17/2013	381.58	845.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/18/2013	381.29	848.00	299	297.4	1.6	Convergent	Yes	297	307.2	10.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/19/2013	381.70	0.00	299				Yes	297	303.9	6.9	Convergent	Yes			**Divergent**	0	1
11/20/2013	381.85	800.00	299	305.0	-6.0	Divergent	No	297	308.8	11.8	Convergent	Yes	**No**	5.88	**Convergent**	1	0
11/21/2013	381.56	800.00	299	313.8	-14.8	Divergent	No	297	305.8	8.8	Convergent	Yes	**No**	-5.99	**Divergent**	0	1
11/22/2013	381.56	800.00	299	298.1	0.9	Convergent	Yes	297	307.3	10.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/23/2013	381.88	800.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/24/2013	382.16	800.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/25/2013	382.29	800.00	299	305.0	-6.0	Divergent	No	297	310.1	13.1	Convergent	Yes	**No**	7.11	**Convergent**	1	0
11/26/2013	382.31	800.00	299	292.1	6.9	Convergent	Yes	297	310.3	13.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/27/2013	381.17	800.00	299	294.1	4.9	Convergent	Yes	297	308.8	11.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/28/2013	379.82	950.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/29/2013	379.43	950.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
11/30/2013	379.54	950.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
12/1/2013	379.34	950.00	299	NA	NA	Convergent	Yes	297	NA	NA	NA	NA	NA		**Convergent**	1	0
12/2/2013	379.15	950.00	299	300.6	-1.6	Divergent	No	297	304.9	7.9	Convergent	Yes	**No**	6.31	**Convergent**	1	0
12/3/2013	380.10	950.00	299	Reverse Gradient		Convergent	Yes	297	314.9	17.9	Convergent	Yes	**Yes**		**Convergent**	1	0
12/4/2013	379.42	0.00	299	305.2	-6.2	Divergent	No	297	307.1	10.1	Convergent	Yes	**No**	3.90	**Convergent**	1	0
12/5/2013	379.52	0.00	299	318.1	-19.1	Divergent	No	297	311.5	14.5	Convergent	Yes	**No**	-4.62	**Divergent**	0	1
12/6/2013	379.43	432.91	299	316.0	-17.0	Divergent	No	297	312.5	15.5	Convergent	Yes	**No**	-1.42	**Divergent**	0	1
12/7/2013	379.66	700.00	299	307.0	-8.0	Divergent	No	297	311.7	14.7	Convergent	Yes	**No**	6.73	**Convergent**	1	0
12/8/2013	379.45	700.00	299	298.8	0.2	Convergent	Yes	297	309.3	12.3	Convergent	Yes	**Yes**	12.82	**Convergent**	1	0
12/9/2013	379.07	644.42	299	298.9	0.1	Convergent	Yes	297	308.4	11.4	Convergent	Yes	**Yes**	12.41	**Convergent**	1	0
12/10/2013	378.48	635.29	299	299.9	-0.9	Divergent	No	297	306.5	9.5	Convergent	Yes	**No**	8.58	**Convergent**	1	0
12/11/2013	378.07	694.16	299	300.4	-1.4	Divergent	No	297	305.5	8.5	Convergent	Yes	**No**	7.09	**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
12/12/2013	377.63	718.37	299	300.9	-1.9	Divergent	No	297	304.8	7.8	Convergent	Yes	**No**	5.91	**Convergent**	1	0
12/13/2013	377.15	775.04	299	300.9	-1.9	Divergent	No	297	304.6	7.6	Convergent	Yes	**No**	5.73	**Convergent**	1	0
12/14/2013	377.47	777.98	299	301.3	-2.3	Divergent	No	297	304.4	7.4	Convergent	Yes	**No**	5.05	**Convergent**	1	0
12/15/2013	378.19	701.04	299	301.3	-2.3	Divergent	No	297	303.8	6.8	Convergent	Yes	**No**	4.43	**Convergent**	1	0
12/16/2013	377.95	806.03	299	300.9	-1.9	Divergent	No	297	302.0	5.0	Convergent	Yes	**No**	3.13	**Convergent**	1	0
12/17/2013	378.17	895.06	299	299.9	-0.9	Divergent	No	297	299.9	2.9	Convergent	Yes	**No**	1.92	**Convergent**	1	0
12/18/2013	378.53	790.49	299	300.4	-1.4	Divergent	No	297	298.4	1.4	Convergent	Yes	**No**	-0.01	**Divergent**	0	1
12/19/2013	378.70	795.08	299	302.0	-3.0	Divergent	No	297	298.2	1.2	Convergent	Yes	**No**	-1.76	**Divergent**	0	1
12/20/2013	378.53	1038.36	299	301.5	-2.5	Divergent	No	297	298.0	1.0	Convergent	Yes	**No**	-1.57	**Divergent**	0	1
12/21/2013	379.13	1137.75	299	300.5	-1.5	Divergent	No	297	297.2	0.2	Convergent	Yes	**No**	-1.34	**Divergent**	0	1
12/22/2013	379.67	1066.42	299	298.8	0.2	Convergent	Yes	297	297.4	0.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/23/2013	379.05	1040.40	299	297.5	1.5	Convergent	Yes	297	298.4	1.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/24/2013	378.38	1059.53	299	297.6	1.4	Convergent	Yes	297	299.2	2.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/25/2013	377.85	1104.28	299	298.2	0.8	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/26/2013	378.93	1035.34	299	297.7	1.3	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/27/2013	379.79	923.45	299	296.2	2.8	Convergent	Yes	297	300.1	3.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/28/2013	379.79	902.66	299	296.0	3.0	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/29/2013	379.51	935.81	299	295.3	3.7	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/30/2013	379.14	943.72	299	295.4	3.6	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/31/2013	378.25	1032.54	299	296.2	2.8	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
															2013 Totals	352	13
															2013 % Convergent	**96.4%**	

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
1/1/2014	378.40	1022.44	299	296.4	2.6	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/2/2014	379.11	971.64	299	295.7	3.3	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/3/2014	377.95	1012.74	299	295.7	3.3	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/4/2014	377.38	1093.60	299	297.0	2.0	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/5/2014	377.75	1081.05	299	297.1	1.9	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/6/2014	377.53	1084.30	299	297.1	1.9	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/7/2014	377.23	1078.35	299	296.6	2.4	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/8/2014	377.36	1092.75	299	297.1	1.9	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/9/2014	378.10	1019.63	299	296.0	3.0	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/10/2014	379.63	873.36	299	295.5	3.5	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/11/2014	379.75	857.44	299	293.8	5.2	Convergent	Yes	297	302.1	5.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/12/2014	379.49	850.83	299	293.5	5.5	Convergent	Yes	297	302.6	5.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/13/2014	379.32	837.14	299	293.6	5.4	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/14/2014	379.78	730.95	299	294.1	4.9	Convergent	Yes	297	302.1	5.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/15/2014	380.30	659.07	299	292.9	6.1	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/16/2014	380.46	611.84	299	293.4	5.6	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/17/2014	380.50	628.04	299	293.9	5.1	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/18/2014	380.26	622.20	299	293.3	5.7	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/19/2014	380.50	619.36	299	293.1	5.9	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/20/2014	380.51	620.13	299	293.1	5.9	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/21/2014	380.83	594.95	299	293.8	5.2	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/22/2014	379.69	661.67	299	293.9	5.1	Convergent	Yes	297	301.7	4.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/23/2014	379.20	743.23	299	294.6	4.4	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/24/2014	378.87	741.47	299	294.8	4.2	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/25/2014	379.21	774.41	299	294.9	4.1	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/26/2014	379.72	779.83	299	294.7	4.3	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/27/2014	379.35	743.76	299	293.1	5.9	Convergent	Yes	297	299.4	2.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/28/2014	378.19	780.83	299	294.2	4.8	Convergent	Yes	297	299.6	2.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/29/2014	378.00	814.29	299	295.9	3.1	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/30/2014	378.36	790.73	299	295.9	3.1	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/31/2014	379.40	697.93	299	295.3	3.7	Convergent	Yes	297	299.6	2.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/1/2014	379.79	648.24	299	293.9	5.1	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/2/2014	379.03	693.19	299	293.9	5.1	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/3/2014	378.31	767.89	299	295.8	3.2	Convergent	Yes	297	299.6	2.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/4/2014	377.80	803.35	299	297.0	2.0	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/5/2014	377.65	856.47	299	297.2	1.8	Convergent	Yes	297	299.2	2.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/6/2014	377.86	823.58	299	297.2	1.8	Convergent	Yes	297	298.8	1.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/7/2014	378.20	784.57	299	297.0	2.0	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/8/2014	378.38	760.04	299	297.0	2.0	Convergent	Yes	297	298.9	1.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/9/2014	378.71	739.59	299	296.2	2.8	Convergent	Yes	297	298.8	1.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/10/2014	378.91	705.55	299	295.9	3.1	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/11/2014	378.24	750.85	299	296.0	3.0	Convergent	Yes	297	299.6	2.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/12/2014	377.51	820.87	299	296.3	2.7	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/13/2014	377.18	895.42	299	297.2	1.8	Convergent	Yes	297	299.8	2.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/14/2014	377.30	914.98	299	296.6	2.4	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/15/2014	377.65	873.54	299	296.0	3.0	Convergent	Yes	297	299.2	2.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/16/2014	377.70	866.17	299	296.5	2.5	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/17/2014	377.88	829.47	299	296.4	2.6	Convergent	Yes	297	299.4	2.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/18/2014	377.66	841.79	299	296.3	2.7	Convergent	Yes	297	299.3	2.3	Convergent	Yes	**Yes**		**Convergent**	1	0
2/19/2014	377.67	851.83	299	296.3	2.7	Convergent	Yes	297	299.4	2.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/20/2014	379.87	659.67	299	295.1	3.9	Convergent	Yes	297	298.4	1.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/21/2014	385.90	158.53	299	286.6	12.4	Convergent	Yes	297	290.6	-6.4	Divergent	No	**No**	5.94	**Convergent**	1	0
2/22/2014	391.97	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/23/2014	393.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/24/2014	394.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/25/2014	392.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/26/2014	390.22	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/27/2014	388.33	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/28/2014	386.73	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/1/2014	386.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/2/2014	385.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/3/2014	383.20	150.45	299	Reverse Gradient		Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/4/2014	383.45	211.51	299	259.4	39.6	Convergent	Yes	297	298.2	1.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/5/2014	383.92	218.59	299	268.2	30.8	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	27.87	**Convergent**	1	0
3/6/2014	384.40	137.59	299	265.1	33.9	Convergent	Yes	297	290.9	-6.1	Divergent	No	**No**	27.81	**Convergent**	1	0
3/7/2014	383.93	212.19	299	267.7	31.3	Convergent	Yes	297	290.9	-6.1	Divergent	No	**No**	25.26	**Convergent**	1	0
3/8/2014	383.46	291.88	299	278.8	20.2	Convergent	Yes	297	291.4	-5.6	Divergent	No	**No**	14.57	**Convergent**	1	0
3/9/2014	382.20	383.33	299	286.3	12.7	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	10.83	**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
3/10/2014	382.02	483.84	299	289.2	9.8	Convergent	Yes	297	296.5	-0.5	Divergent	No	**No**	9.22	**Convergent**	1	0
3/11/2014	382.18	576.34	299	288.3	10.7	Convergent	Yes	297	297.4	0.4	Convergent	Yes	**Yes**		**Convergent**	1	0
3/12/2014	385.61	220.34	299	277.7	21.3	Convergent	Yes	297	292.1	-4.9	Divergent	No	**No**	16.31	**Convergent**	1	0
3/13/2014	387.59	0.00	299	230.5	68.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/14/2014	389.76	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/15/2014	390.26	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/16/2014	390.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/17/2014	390.52	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/18/2014	390.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/19/2014	390.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/20/2014	390.91	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/21/2014	390.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/22/2014	390.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/23/2014	389.89	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/24/2014	389.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/25/2014	389.78	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/26/2014	389.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/27/2014	389.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/28/2014	389.15	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/29/2014	389.13	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/30/2014	388.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/31/2014	388.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/1/2014	388.33	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/2/2014	389.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/3/2014	392.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/4/2014	399.96	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/5/2014	403.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/6/2014	400.59	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/7/2014	397.65	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/8/2014	395.62	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/9/2014	394.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/10/2014	393.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/11/2014	392.65	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/12/2014	391.69	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/13/2014	391.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/14/2014	391.11	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/15/2014	390.63	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/16/2014	390.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/17/2014	392.51	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/18/2014	393.66	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/19/2014	394.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/20/2014	394.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/21/2014	394.34	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/22/2014	394.45	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/23/2014	394.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/24/2014	394.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/25/2014	394.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/26/2014	394.51	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/27/2014	394.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/28/2014	394.96	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/29/2014	396.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/30/2014	397.27	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/1/2014	397.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/2/2014	397.44	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/3/2014	397.20	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/4/2014	396.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/5/2014	396.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/6/2014	395.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/7/2014	395.45	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/8/2014	395.34	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/9/2014	395.27	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/10/2014	395.18	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/11/2014	395.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/12/2014	396.15	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/13/2014	396.90	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/14/2014	396.98	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/15/2014	397.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/16/2014	397.89	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/17/2014	398.63	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
5/18/2014	399.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/19/2014	399.80	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/20/2014	399.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/21/2014	398.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/22/2014	398.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/23/2014	398.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/24/2014	397.72	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/25/2014	397.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/26/2014	397.44	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/27/2014	397.34	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/28/2014	397.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/29/2014	397.27	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/30/2014	396.97	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/31/2014	396.57	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/1/2014	396.20	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/2/2014	395.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/3/2014	395.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/4/2014	395.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/5/2014	395.85	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/6/2014	396.66	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/7/2014	398.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/8/2014	401.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/9/2014	402.19	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/10/2014	402.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/11/2014	404.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/12/2014	404.86	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/13/2014	404.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/14/2014	402.88	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/15/2014	401.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/16/2014	400.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/17/2014	398.44	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/18/2014	397.73	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/19/2014	398.13	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/20/2014	397.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/21/2014	398.09	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/22/2014	399.16	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/23/2014	399.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/24/2014	400.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/25/2014	402.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/26/2014	402.80	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/27/2014	403.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/28/2014	403.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/29/2014	403.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/30/2014	403.95	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/1/2014	404.00	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/2/2014	404.34	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/3/2014	404.70	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/4/2014	404.90	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/5/2014	405.01	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/6/2014	405.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/7/2014	406.21	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/8/2014	407.02	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/9/2014	407.91	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/10/2014	409.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/11/2014	409.98	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/12/2014	409.69	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/13/2014	408.98	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/14/2014	408.23	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/15/2014	407.47	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/16/2014	406.64	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/17/2014	405.90	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/18/2014	405.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/19/2014	404.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/20/2014	403.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/21/2014	402.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/22/2014	401.02	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/23/2014	399.61	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/24/2014	398.41	46.71	299	Reverse Gradient		Convergent	Yes	297	334.3	37.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/25/2014	397.71	114.36	299	Reverse Gradient		Convergent	Yes	297	312.5	15.5	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
7/26/2014	396.81	191.83	299	Reverse Gradient		Convergent	Yes	297	306.1	9.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/27/2014	395.93	264.13	299	Reverse Gradient		Convergent	Yes	297	303.5	6.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/28/2014	395.51	333.40	299	323.0	-24.0	Divergent	No	297	302.7	5.7	Convergent	Yes	**No**	-18.39	**Divergent**	0	1
7/29/2014	394.40	554.35	299	295.0	4.0	Convergent	Yes	297	303.2	6.2	Convergent	Yes	**Yes**		**Convergent**	1	0
7/30/2014	392.28	824.67	299	297.8	1.2	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/31/2014	390.41	1234.04	299	298.7	0.3	Convergent	Yes	297	301.5	4.5	Convergent	Yes	**Yes**		**Convergent**	1	0
8/1/2014	389.41	1261.95	299	296.4	2.6	Convergent	Yes	297	299.8	2.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/2/2014	388.77	1258.95	299	295.2	3.8	Convergent	Yes	297	297.9	0.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/3/2014	388.14	1333.52	299	294.8	4.2	Convergent	Yes	297	296.5	-0.5	Divergent	No	**No**	3.71	**Convergent**	1	0
8/4/2014	387.39	1332.66	299	295.8	3.2	Convergent	Yes	297	295.6	-1.4	Divergent	No	**No**	1.78	**Convergent**	1	0
8/5/2014	386.78	1395.85	299	295.5	3.5	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	1.07	**Convergent**	1	0
8/6/2014	386.92	1331.37	299	294.5	4.5	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	1.69	**Convergent**	1	0
8/7/2014	387.10	1240.52	299	293.8	5.2	Convergent	Yes	297	293.7	-3.3	Divergent	No	**No**	1.88	**Convergent**	1	0
8/8/2014	390.27	640.21	299	288.7	10.3	Convergent	Yes	297	292.1	-4.9	Divergent	No	**No**	5.35	**Convergent**	1	0
8/9/2014	389.47	624.11	299	284.1	14.9	Convergent	Yes	297	291.9	-5.1	Divergent	No	**No**	9.81	**Convergent**	1	0
8/10/2014	388.57	756.07	299	287.8	11.2	Convergent	Yes	297	294.0	-3.0	Divergent	No	**No**	8.25	**Convergent**	1	0
8/11/2014	388.33	737.72	299	290.2	8.8	Convergent	Yes	297	293.5	-3.5	Divergent	No	**No**	5.33	**Convergent**	1	0
8/12/2014	387.14	974.21	299	293.6	5.4	Convergent	Yes	297	294.7	-2.3	Divergent	No	**No**	3.15	**Convergent**	1	0
8/13/2014	386.85	1078.65	299	295.6	3.4	Convergent	Yes	297	295.4	-1.6	Divergent	No	**No**	1.73	**Convergent**	1	0
8/14/2014	385.95	1214.60	299	295.9	3.1	Convergent	Yes	297	295.9	-1.1	Divergent	No	**No**	2.04	**Convergent**	1	0
8/15/2014	386.20	1212.74	299	294.7	4.3	Convergent	Yes	297	295.4	-1.6	Divergent	No	**No**	2.67	**Convergent**	1	0
8/16/2014	385.89	1205.65	299	293.6	5.4	Convergent	Yes	297	294.9	-2.1	Divergent	No	**No**	3.32	**Convergent**	1	0
8/17/2014	388.04	991.60	299	291.4	7.6	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	4.73	**Convergent**	1	0
8/18/2014	389.60	602.58	299	286.3	12.7	Convergent	Yes	297	293.1	-3.9	Divergent	No	**No**	8.84	**Convergent**	1	0
8/19/2014	386.47	698.66	299	290.3	8.7	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	6.73	**Convergent**	1	0
8/20/2014	388.05	650.42	299	293.9	5.1	Convergent	Yes	297	295.4	-1.6	Divergent	No	**No**	3.43	**Convergent**	1	0
8/21/2014	388.67	634.79	299	289.7	9.3	Convergent	Yes	297	293.6	-3.4	Divergent	No	**No**	5.85	**Convergent**	1	0
8/22/2014	388.91	605.22	299	287.3	11.7	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	8.85	**Convergent**	1	0
8/23/2014	387.90	646.03	299	289.1	9.9	Convergent	Yes	297	295.2	-1.8	Divergent	No	**No**	8.10	**Convergent**	1	0
8/24/2014	387.75	648.34	299	291.9	7.1	Convergent	Yes	297	295.6	-1.4	Divergent	No	**No**	5.64	**Convergent**	1	0
8/25/2014	387.84	653.85	299	291.9	7.1	Convergent	Yes	297	295.2	-1.8	Divergent	No	**No**	5.27	**Convergent**	1	0
8/26/2014	389.65	437.96	299	289.1	9.9	Convergent	Yes	297	293.5	-3.5	Divergent	No	**No**	6.42	**Convergent**	1	0
8/27/2014	388.90	455.27	299	287.8	11.2	Convergent	Yes	297	291.9	-5.1	Divergent	No	**No**	6.13	**Convergent**	1	0
8/28/2014	388.31	540.66	299	290.5	8.5	Convergent	Yes	297	292.8	-4.2	Divergent	No	**No**	4.33	**Convergent**	1	0
8/29/2014	388.94	466.24	299	290.5	8.5	Convergent	Yes	297	293.0	-4.0	Divergent	No	**No**	4.49	**Convergent**	1	0
8/30/2014	389.64	373.23	299	288.7	10.3	Convergent	Yes	297	291.2	-5.8	Divergent	No	**No**	4.43	**Convergent**	1	0
8/31/2014	389.53	377.79	299	287.6	11.4	Convergent	Yes	297	289.5	-7.5	Divergent	No	**No**	3.88	**Convergent**	1	0
9/1/2014	389.27	414.21	299	289.8	9.2	Convergent	Yes	297	291.4	-5.6	Divergent	No	**No**	3.63	**Convergent**	1	0
9/2/2014	392.66	130.66	299	281.2	17.8	Convergent	Yes	297	282.8	-14.2	Divergent	No	**No**	3.67	**Convergent**	1	0
9/3/2014	396.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/4/2014	395.84	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/5/2014	393.35	8.14	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/6/2014	392.66	76.92	299	Reverse Gradient		Convergent	Yes	297	211.9	-85.1	Divergent	No	**No**	-85.11	**Divergent**	0	1
9/7/2014	393.44	2.60	299	Reverse Gradient		Convergent	Yes	297	255.5	-41.5	Divergent	No	**No**	-41.53	**Divergent**	0	1
9/8/2014	392.75	98.32	299	Reverse Gradient		Convergent	Yes	297	273.5	-23.5	Divergent	No	**No**	-23.51	**Divergent**	0	1
9/9/2014	391.49	328.36	299	275.3	23.7	Convergent	Yes	297	296.8	-0.2	Divergent	No	**No**	23.57	**Convergent**	1	0
9/10/2014	393.78	126.52	299	260.6	38.4	Convergent	Yes	297	295.7	-1.3	Divergent	No	**No**	37.12	**Convergent**	1	0
9/11/2014	397.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/12/2014	399.92	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/13/2014	402.96	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/14/2014	405.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/15/2014	405.98	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/16/2014	405.21	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/17/2014	404.18	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/18/2014	403.15	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/19/2014	401.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/20/2014	399.93	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/21/2014	398.33	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/22/2014	396.99	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/23/2014	396.21	52.93	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/24/2014	395.40	395.77	299	Reverse Gradient		Convergent	Yes	297	328.8	31.8	Convergent	Yes	**Yes**		**Convergent**	1	0
9/25/2014	394.42	623.35	299	Reverse Gradient		Convergent	Yes	297	323.3	26.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/26/2014	393.53	565.81	299	238.0	61.0	Convergent	Yes	297	317.1	20.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/27/2014	392.02	623.61	299	274.8	24.2	Convergent	Yes	297	309.1	12.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/28/2014	390.33	622.50	299	295.2	3.8	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/29/2014	389.87	750.44	299	303.4	-4.4	Divergent	No	297	302.9	5.9	Convergent	Yes	**No**	1.50	**Convergent**	1	0
9/30/2014	388.95	938.62	299	302.8	-3.8	Divergent	No	297	302.8	5.8	Convergent	Yes	**No**	2.03	**Convergent**	1	0
10/1/2014	388.54	1021.24	299	301.5	-2.5	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	3.99	**Convergent**	1	0
10/2/2014	392.39	790.33	299	293.5	5.5	Convergent	Yes	297	304.0	7.0	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
10/3/2014	397.28	224.44	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/4/2014	401.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/5/2014	402.49	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/6/2014	400.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/7/2014	397.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/8/2014	395.57	18.18	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/9/2014	394.40	161.00	299	Reverse Gradient		Convergent	Yes	297	314.4	17.4	Convergent	Yes	**Yes**		**Convergent**	1	0
10/10/2014	394.34	126.54	299	Reverse Gradient		Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/11/2014	394.92	33.52	299	Reverse Gradient	≥90	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	87.84	**Convergent**	1	0
10/12/2014	395.73	1.18	299	Reverse Gradient	≥90	Convergent	Yes	297	285.1	-11.9	Divergent	No	**No**	78.05	**Convergent**	1	0
10/13/2014	396.22	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/14/2014	397.14	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/15/2014	398.99	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/16/2014	401.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/17/2014	403.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/18/2014	402.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/19/2014	399.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/20/2014	397.35	80.57	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/21/2014	396.00	268.97	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/22/2014	395.14	237.63	299	Reverse Gradient		Convergent	Yes	297	318.6	21.6	Convergent	Yes	**Yes**		**Convergent**	1	0
10/23/2014	394.93	300.00	299	Reverse Gradient		Convergent	Yes	297	309.5	12.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/24/2014	394.05	300.00	299	Reverse Gradient		Convergent	Yes	297	306.6	9.6	Convergent	Yes	**Yes**		**Convergent**	1	0
10/25/2014	393.46	300.00	299	23.5	275.5	Divergent	No	297	302.8	5.8	Convergent	Yes	**No**	-269.69	**Divergent**	0	1
10/26/2014	393.28	900.14	299	314.0	-15.0	Divergent	No	297	303.3	6.3	Convergent	Yes	**No**	-8.71	**Divergent**	0	1
10/27/2014	392.74	913.55	299	270.4	28.6	Convergent	Yes	297	301.9	4.9	Convergent	Yes	**Yes**		**Convergent**	1	0
10/28/2014	392.50	636.64	299	277.9	21.1	Convergent	Yes	297	296.6	-0.4	Divergent	No	**No**	20.69	**Convergent**	1	0
10/29/2014	390.83	916.88	299	297.8	1.2	Convergent	Yes	297	298.0	1.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/30/2014	390.39	1158.92	299	295.2	3.8	Convergent	Yes	297	298.1	1.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/31/2014	390.22	1121.46	299	291.1	7.9	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	5.90	**Convergent**	1	0
11/1/2014	389.58	1152.65	299	290.5	8.5	Convergent	Yes	297	293.4	-3.6	Divergent	No	**No**	4.97	**Convergent**	1	0
11/2/2014	389.53	1110.33	299	287.9	11.1	Convergent	Yes	297	292.2	-4.8	Divergent	No	**No**	6.32	**Convergent**	1	0
11/3/2014	388.55	1030.04	299	286.9	12.1	Convergent	Yes	297	290.9	-6.1	Divergent	No	**No**	6.07	**Convergent**	1	0
11/4/2014	387.63	1098.37	299	293.1	5.9	Convergent	Yes	297	292.7	-4.3	Divergent	No	**No**	1.62	**Convergent**	1	0
11/5/2014	387.47	1128.76	299	295.5	3.5	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	1.24	**Convergent**	1	0
11/6/2014	387.50	1162.93	299	295.5	3.5	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	1.55	**Convergent**	1	0
11/7/2014	387.18	1154.47	299	294.5	4.5	Convergent	Yes	297	295.4	-1.6	Divergent	No	**No**	2.86	**Convergent**	1	0
11/8/2014	387.23	1136.64	299	293.6	5.4	Convergent	Yes	297	295.3	-1.7	Divergent	No	**No**	3.67	**Convergent**	1	0
11/9/2014	387.18	1099.11	299	291.9	7.1	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	4.76	**Convergent**	1	0
11/10/2014	386.78	1064.65	299	291.9	7.1	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	4.76	**Convergent**	1	0
11/11/2014	386.73	1032.32	299	292.9	6.1	Convergent	Yes	297	294.4	-2.6	Divergent	No	**No**	3.48	**Convergent**	1	0
11/12/2014	386.52	1013.44	299	293.6	5.4	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	2.47	**Convergent**	1	0
11/13/2014	386.18	1042.12	299	292.9	6.1	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	3.17	**Convergent**	1	0
11/14/2014	386.15	957.67	299	292.9	6.1	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	3.27	**Convergent**	1	0
11/15/2014	386.28	890.02	299	293.6	5.4	Convergent	Yes	297	293.6	-3.4	Divergent	No	**No**	1.97	**Convergent**	1	0
11/16/2014	386.84	800.71	299	293.1	5.9	Convergent	Yes	297	293.5	-3.5	Divergent	No	**No**	2.38	**Convergent**	1	0
11/17/2014	386.46	840.37	299	293.9	5.1	Convergent	Yes	297	293.7	-3.3	Divergent	No	**No**	1.81	**Convergent**	1	0
11/18/2014	385.94	955.92	299	294.2	4.8	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	2.42	**Convergent**	1	0
11/19/2014	385.72	1011.30	299	293.5	5.5	Convergent	Yes	297	294.9	-2.1	Divergent	No	**No**	3.44	**Convergent**	1	0
11/20/2014	384.32	1221.10	299	295.7	3.3	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	1.42	**Convergent**	1	0
11/21/2014	383.32	1388.14	299	296.3	2.7	Convergent	Yes	297	295.6	-1.4	Divergent	No	**No**	1.27	**Convergent**	1	0
11/22/2014	382.22	1514.68	299	295.6	3.4	Convergent	Yes	297	295.3	-1.7	Divergent	No	**No**	1.72	**Convergent**	1	0
11/23/2014	381.70	1549.42	299	296.0	3.0	Convergent	Yes	297	294.9	-2.1	Divergent	No	**No**	0.89	**Convergent**	1	0
11/24/2014	384.25	1402.88	299	294.6	4.4	Convergent	Yes	297	293.4	-3.6	Divergent	No	**No**	0.78	**Convergent**	1	0
11/25/2014	386.79	763.94	299	288.5	10.5	Convergent	Yes	297	290.3	-6.7	Divergent	No	**No**	3.78	**Convergent**	1	0
11/26/2014	386.48	749.69	299	284.6	14.4	Convergent	Yes	297	289.6	-7.4	Divergent	No	**No**	7.00	**Convergent**	1	0
11/27/2014	387.18	609.98	299	284.8	14.2	Convergent	Yes	297	290.7	-6.3	Divergent	No	**No**	7.96	**Convergent**	1	0
11/28/2014	387.12	608.61	299	285.6	13.4	Convergent	Yes	297	290.9	-6.1	Divergent	No	**No**	7.37	**Convergent**	1	0
11/29/2014	386.84	704.84	299	286.6	12.4	Convergent	Yes	297	293.2	-3.8	Divergent	No	**No**	8.56	**Convergent**	1	0
11/30/2014	386.70	720.13	299	287.6	11.4	Convergent	Yes	297	293.2	-3.8	Divergent	No	**No**	7.67	**Convergent**	1	0
12/1/2014	387.11	545.80	299	286.6	12.4	Convergent	Yes	297	291.9	-5.1	Divergent	No	**No**	7.21	**Convergent**	1	0
12/2/2014	387.06	508.48	299	289.2	9.8	Convergent	Yes	297	291.9	-5.1	Divergent	No	**No**	4.68	**Convergent**	1	0
12/3/2014	386.84	581.00	299	292.5	6.5	Convergent	Yes	297	292.7	-4.3	Divergent	No	**No**	2.20	**Convergent**	1	0
12/4/2014	386.43	723.25	299	293.1	5.9	Convergent	Yes	297	294.0	-3.0	Divergent	No	**No**	2.90	**Convergent**	1	0
12/5/2014	386.20	755.78	299	291.4	7.6	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	5.52	**Convergent**	1	0
12/6/2014	386.98	584.20	299	292.1	6.9	Convergent	Yes	297	294.5	-2.5	Divergent	No	**No**	4.38	**Convergent**	1	0
12/7/2014	388.21	485.71	299	291.8	7.2	Convergent	Yes	297	292.9	-4.1	Divergent	No	**No**	3.04	**Convergent**	1	0
12/8/2014	388.40	530.96	299	290.5	8.5	Convergent	Yes	297	292.4	-4.6	Divergent	No	**No**	3.84	**Convergent**	1	0
12/9/2014	387.67	580.38	299	292.4	6.6	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	4.75	**Convergent**	1	0
12/10/2014	386.85	635.35	299	295.2	3.8	Convergent	Yes	297	297.3	0.3	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
12/11/2014	386.81	658.79	299	297.0	2.0	Convergent	Yes	297	297.8	0.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/12/2014	387.33	584.31	299	296.9	2.1	Convergent	Yes	297	296.3	-0.7	Divergent	No	**No**	1.41	**Convergent**	1	0
12/13/2014	387.23	584.67	299	295.2	3.8	Convergent	Yes	297	296.7	-0.3	Divergent	No	**No**	3.43	**Convergent**	1	0
12/14/2014	386.66	667.34	299	297.0	2.0	Convergent	Yes	297	297.7	0.7	Convergent	Yes	**Yes**		**Convergent**	1	0
12/15/2014	385.70	795.01	299	296.4	2.6	Convergent	Yes	297	297.8	0.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/16/2014	385.75	789.25	299	294.6	4.4	Convergent	Yes	297	296.6	-0.4	Divergent	No	**No**	4.01	**Convergent**	1	0
12/17/2014	385.55	780.78	299	294.6	4.4	Convergent	Yes	297	296.1	-0.9	Divergent	No	**No**	3.52	**Convergent**	1	0
12/18/2014	385.27	814.70	299	293.7	5.3	Convergent	Yes	297	296.2	-0.8	Divergent	No	**No**	4.46	**Convergent**	1	0
12/19/2014	385.20	820.10	299	293.9	5.1	Convergent	Yes	297	296.3	-0.7	Divergent	No	**No**	4.44	**Convergent**	1	0
12/20/2014	385.67	760.81	299	293.7	5.3	Convergent	Yes	297	295.5	-1.5	Divergent	No	**No**	3.79	**Convergent**	1	0
12/21/2014	385.85	722.07	299	294.4	4.6	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	2.68	**Convergent**	1	0
12/22/2014	385.68	744.41	299	295.3	3.7	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	1.62	**Convergent**	1	0
12/23/2014	386.08	728.94	299	295.3	3.7	Convergent	Yes	297	295.5	-1.5	Divergent	No	**No**	2.17	**Convergent**	1	0
12/24/2014	386.58	626.66	299	293.6	5.4	Convergent	Yes	297	295.4	-1.6	Divergent	No	**No**	3.82	**Convergent**	1	0
12/25/2014	387.78	470.35	299	292.2	6.8	Convergent	Yes	297	294.5	-2.5	Divergent	No	**No**	4.31	**Convergent**	1	0
12/26/2014	387.60	493.94	299	292.7	6.3	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	3.42	**Convergent**	1	0
12/27/2014	388.06	441.67	299	294.2	4.8	Convergent	Yes	297	294.9	-2.1	Divergent	No	**No**	2.69	**Convergent**	1	0
12/28/2014	388.26	401.19	299	295.6	3.4	Convergent	Yes	297	295.1	-1.9	Divergent	No	**No**	1.45	**Convergent**	1	0
12/29/2014	387.62	530.43	299	297.8	1.2	Convergent	Yes	297	296.5	-0.5	Divergent	No	**No**	0.73	**Convergent**	1	0
12/30/2014	387.38	584.37	299	298.0	1.0	Convergent	Yes	297	298.8	1.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/31/2014	386.52	675.80	299	294.8	4.2	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
															2014 Totals	359	6
															2014 % Convergent	**98%**	

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
1/1/2015	385.30	785.61	299	294.8	4.2	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/2/2015	383.00	1167.57	299	297.0	2.0	Convergent	Yes	297	298.5	1.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/3/2015	382.20	1357.71	299	296.9	2.1	Convergent	Yes	297	297.1	0.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/4/2015	383.48	1207.02	299	295.6	3.4	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	0.44	**Convergent**	1	0
1/5/2015	384.48	919.86	299	293.3	5.7	Convergent	Yes	297	292.7	-4.3	Divergent	No	**No**	1.40	**Convergent**	1	0
1/6/2015	382.61	1095.30	299	293.3	5.7	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	2.99	**Convergent**	1	0
1/7/2015	381.65	1253.01	299	295.6	3.4	Convergent	Yes	297	294.7	-2.3	Divergent	No	**No**	1.04	**Convergent**	1	0
1/8/2015	380.85	1338.84	299	295.5	3.5	Convergent	Yes	297	294.1	-2.9	Divergent	No	**No**	0.56	**Convergent**	1	0
1/9/2015	380.34	1477.93	299	296.0	3.0	Convergent	Yes	297	294.3	-2.7	Divergent	No	**No**	0.34	**Convergent**	1	0
1/10/2015	380.63	1423.48	299	295.1	3.9	Convergent	Yes	297	293.4	-3.6	Divergent	No	**No**	0.29	**Convergent**	1	0
1/11/2015	381.57	1287.81	299	293.7	5.3	Convergent	Yes	297	292.7	-4.3	Divergent	No	**No**	1.07	**Convergent**	1	0
1/12/2015	382.83	1075.54	299	292.2	6.8	Convergent	Yes	297	292.5	-4.5	Divergent	No	**No**	2.25	**Convergent**	1	0
1/13/2015	382.23	1086.18	299	291.8	7.2	Convergent	Yes	297	293.5	-3.5	Divergent	No	**No**	3.70	**Convergent**	1	0
1/14/2015	382.08	1043.50	299	292.6	6.4	Convergent	Yes	297	295.2	-1.8	Divergent	No	**No**	4.64	**Convergent**	1	0
1/15/2015	382.05	1007.06	299	293.8	5.2	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	3.21	**Convergent**	1	0
1/16/2015	382.52	951.87	299	294.2	4.8	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	2.60	**Convergent**	1	0
1/17/2015	382.57	954.07	299	294.0	5.0	Convergent	Yes	297	295.5	-1.5	Divergent	No	**No**	3.48	**Convergent**	1	0
1/18/2015	382.48	954.75	299	294.7	4.3	Convergent	Yes	297	295.5	-1.5	Divergent	No	**No**	2.75	**Convergent**	1	0
1/19/2015	382.45	953.90	299	294.7	4.3	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	2.34	**Convergent**	1	0
1/20/2015	382.96	903.24	299	294.6	4.4	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	2.19	**Convergent**	1	0
1/21/2015	382.97	890.18	299	295.0	4.0	Convergent	Yes	297	294.9	-2.1	Divergent	No	**No**	1.92	**Convergent**	1	0
1/22/2015	382.89	881.55	299	295.0	4.0	Convergent	Yes	297	294.3	-2.7	Divergent	No	**No**	1.26	**Convergent**	1	0
1/23/2015	383.10	820.57	299	295.7	3.3	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	0.91	**Convergent**	1	0
1/24/2015	383.19	843.42	299	295.6	3.4	Convergent	Yes	297	295.0	-2.0	Divergent	No	**No**	1.38	**Convergent**	1	0
1/25/2015	383.08	862.80	299	294.9	4.1	Convergent	Yes	297	295.2	-1.8	Divergent	No	**No**	2.30	**Convergent**	1	0
1/26/2015	383.65	737.38	299	294.6	4.4	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	2.16	**Convergent**	1	0
1/27/2015	383.41	816.34	299	293.5	5.5	Convergent	Yes	297	294.2	-2.8	Divergent	No	**No**	2.77	**Convergent**	1	0
1/28/2015	383.35	807.07	299	293.5	5.5	Convergent	Yes	297	294.9	-2.1	Divergent	No	**No**	3.42	**Convergent**	1	0
1/29/2015	384.35	701.42	299	293.9	5.1	Convergent	Yes	297	294.4	-2.6	Divergent	No	**No**	2.52	**Convergent**	1	0
1/30/2015	384.05	662.46	299	293.3	5.7	Convergent	Yes	297	293.7	-3.3	Divergent	No	**No**	2.38	**Convergent**	1	0
1/31/2015	383.85	721.63	299	293.5	5.5	Convergent	Yes	297	295.2	-1.8	Divergent	No	**No**	3.66	**Convergent**	1	0
2/1/2015	383.91	747.00	299	294.7	4.3	Convergent	Yes	297	296.1	-0.9	Divergent	No	**No**	3.33	**Convergent**	1	0
2/2/2015	384.38	641.63	299	294.6	4.4	Convergent	Yes	297	294.6	-2.4	Divergent	No	**No**	2.02	**Convergent**	1	0
2/3/2015	383.42	768.04	299	293.5	5.5	Convergent	Yes	297	293.8	-3.2	Divergent	No	**No**	2.33	**Convergent**	1	0
2/4/2015	384.09	720.09	299	293.7	5.3	Convergent	Yes	297	294.8	-2.2	Divergent	No	**No**	3.13	**Convergent**	1	0
2/5/2015	385.05	531.18	299	291.7	7.3	Convergent	Yes	297	292.6	-4.4	Divergent	No	**No**	2.90	**Convergent**	1	0
2/6/2015	384.86	573.13	299	293.1	5.9	Convergent	Yes	297	293.3	-3.7	Divergent	No	**No**	2.21	**Convergent**	1	0
2/7/2015	384.85	614.62	299	294.8	4.2	Convergent	Yes	297	293.7	-3.3	Divergent	No	**No**	0.86	**Convergent**	1	0
2/8/2015	384.85	622.85	299	294.8	4.2	Convergent	Yes	297	294.7	-2.3	Divergent	No	**No**	1.90	**Convergent**	1	0
2/9/2015	384.63	620.15	299	293.6	5.4	Convergent	Yes	297	294.0	-3.0	Divergent	No	**No**	2.45	**Convergent**	1	0
2/10/2015	384.70	606.47	299	293.4	5.6	Convergent	Yes	297	293.2	-3.8	Divergent	No	**No**	1.80	**Convergent**	1	0
2/11/2015	384.90	595.62	299	294.4	4.6	Convergent	Yes	297	293.7	-3.3	Divergent	No	**No**	1.26	**Convergent**	1	0
2/12/2015	385.54	498.25	299	291.1	7.9	Convergent	Yes	297	291.5	-5.5	Divergent	No	**No**	2.44	**Convergent**	1	0
2/13/2015	385.15	514.94	299	289.2	9.8	Convergent	Yes	297	291.2	-5.8	Divergent	No	**No**	4.01	**Convergent**	1	0
2/14/2015	385.36	541.15	299	290.3	8.7	Convergent	Yes	297	290.9	-6.1	Divergent	No	**No**	2.66	**Convergent**	1	0
2/15/2015	385.40	475.14	299	289.2	9.8	Convergent	Yes	297	291.5	-5.5	Divergent	No	**No**	4.30	**Convergent**	1	0
2/16/2015	384.38	631.70	299	289.7	9.3	Convergent	Yes	297	291.5	-5.5	Divergent	No	**No**	3.81	**Convergent**	1	0
2/17/2015	383.44	767.04	299	292.6	6.4	Convergent	Yes	297	293.2	-3.8	Divergent	No	**No**	2.61	**Convergent**	1	0
2/18/2015	383.82	706.40	299	292.2	6.8	Convergent	Yes	297	293.1	-3.9	Divergent	No	**No**	2.87	**Convergent**	1	0
2/19/2015	382.94	795.67	299	292.7	6.3	Convergent	Yes	297	294.4	-2.6	Divergent	No	**No**	3.71	**Convergent**	1	0
2/20/2015	383.03	825.01	299	294.2	4.8	Convergent	Yes	297	297.0	0.0	Divergent	No	**No**	4.77	**Convergent**	1	0
2/21/2015	383.58	778.60	299	293.3	5.7	Convergent	Yes	297	297.9	0.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/22/2015	383.91	676.45	299	292.7	6.3	Convergent	Yes	297	296.4	-0.6	Divergent	No	**No**	5.73	**Convergent**	1	0
2/23/2015	382.42	834.80	299	293.1	5.9	Convergent	Yes	297	296.7	-0.3	Divergent	No	**No**	5.59	**Convergent**	1	0
2/24/2015	381.41	1051.72	299	296.7	2.3	Convergent	Yes	297	299.6	2.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/25/2015	381.70	1052.49	299	297.7	1.3	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/26/2015	382.61	937.88	299	296.1	2.9	Convergent	Yes	297	300.1	3.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/27/2015	381.40	1013.13	299	296.1	2.9	Convergent	Yes	297	299.7	2.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/28/2015	380.93	1126.32	299	297.1	1.9	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/1/2015	381.49	1053.40	299	296.5	2.5	Convergent	Yes	297	301.5	4.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/2/2015	381.89	969.00	299	295.4	3.6	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/3/2015	381.77	954.67	299	295.2	3.8	Convergent	Yes	297	300.8	3.8	Convergent	Yes	**Yes**		**Convergent**	1	0
3/4/2015	381.53	1000.67	299	296.1	2.9	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/5/2015	380.97	1050.38	299	295.5	3.5	Convergent	Yes	297	300.1	3.1	Convergent	Yes	**Yes**		**Convergent**	1	0
3/6/2015	380.98	1026.71	299	295.6	3.4	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
3/7/2015	381.40	980.02	299	295.5	3.5	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/8/2015	381.51	947.01	299	295.3	3.7	Convergent	Yes	297	300.1	3.1	Convergent	Yes	**Yes**		**Convergent**	1	0
3/9/2015	382.63	774.13	299	293.9	5.1	Convergent	Yes	297	298.6	1.6	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
3/10/2015	383.61	619.88	299	291.7	7.3	Convergent	Yes	297	296.1	-0.9	Divergent	No	**No**	6.44	**Convergent**	1	0
3/11/2015	385.37	406.78	299	288.7	10.3	Convergent	Yes	297	290.0	-7.0	Divergent	No	**No**	3.24	**Convergent**	1	0
3/12/2015	386.68	460.30	299	279.4	19.6	Convergent	Yes	297	285.1	-11.9	Divergent	No	**No**	7.69	**Convergent**	1	0
3/13/2015	387.63	431.57	299	262.3	36.7	Convergent	Yes	297	257.4	-39.6	Divergent	No	**No**	-2.88	**Divergent**	0	1
3/14/2015	389.80	42.37	299	223.4	75.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/15/2015	390.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/16/2015	390.49	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/17/2015	390.96	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/18/2015	391.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/19/2015	392.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/20/2015	392.03	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/21/2015	391.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/22/2015	389.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/23/2015	389.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/24/2015	388.77	44.41	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/25/2015	389.08	100.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/26/2015	389.90	41.04	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/27/2015	390.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/28/2015	390.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/29/2015	390.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/30/2015	389.90	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/31/2015	389.15	248.30	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/1/2015	388.08	474.85	299	253.3	45.7	Convergent	Yes	297	288.6	-8.4	Divergent	No	**No**	37.33	**Convergent**	1	0
4/2/2015	387.73	309.45	299	267.7	31.3	Convergent	Yes	297	292.8	-4.2	Divergent	No	**No**	27.12	**Convergent**	1	0
4/3/2015	388.28	269.16	299	278.8	20.2	Convergent	Yes	297	282.1	-14.9	Divergent	No	**No**	5.30	**Convergent**	1	0
4/4/2015	388.93	158.76	299	273.8	25.2	Convergent	Yes	297	268.5	-28.5	Divergent	No	**No**	-3.30	**Divergent**	0	1
4/5/2015	389.83	14.12	299	247.9	51.1	Convergent	Yes	297	215.5	-81.5	Divergent	No	**No**	-30.44	**Divergent**	0	1
4/6/2015	388.55	303.82	299	257.9	41.1	Convergent	Yes	297	254.1	-42.9	Divergent	No	**No**	-1.81	**Divergent**	0	1
4/7/2015	388.66	270.89	299	273.8	25.2	Convergent	Yes	297	285.1	-11.9	Divergent	No	**No**	13.22	**Convergent**	1	0
4/8/2015	390.74	71.88	299	243.8	55.2	Convergent	Yes	297	219.7	-77.3	Divergent	No	**No**	-22.08	**Divergent**	0	1
4/9/2015	393.06	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/10/2015	395.22	130.69	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/11/2015	392.58	400.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/12/2015	390.69	400.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/13/2015	390.13	400.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/14/2015	390.38	279.44	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/15/2015	390.20	163.46	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/16/2015	390.40	359.38	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/17/2015	392.24	152.28	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/18/2015	392.61	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/19/2015	392.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/20/2015	391.85	248.61	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/21/2015	391.56	400.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/22/2015	391.67	400.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/23/2015	391.42	457.90	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/24/2015	391.77	500.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/25/2015	391.96	427.37	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/26/2015	391.91	277.91	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/27/2015	391.13	400.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/28/2015	391.00	400.00	299	243.8	55.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/29/2015	391.50	400.00	299	243.8	55.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/30/2015	391.72	400.00	299	236.0	63.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/1/2015	391.08	431.42	299	243.8	55.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/2/2015	390.22	500.00	299	276.6	22.4	Convergent	Yes	297	331.6	34.6	Convergent	Yes	**Yes**		**Convergent**	1	0
5/3/2015	388.90	538.38	299	295.0	4.0	Convergent	Yes	297	311.1	14.1	Convergent	Yes	**Yes**		**Convergent**	1	0
5/4/2015	387.58	760.61	299	301.5	-2.5	Divergent	No	297	304.0	7.0	Convergent	Yes	**No**	4.45	**Convergent**	1	0
5/5/2015	386.63	852.49	299	301.1	-2.1	Divergent	No	297	301.7	4.7	Convergent	Yes	**No**	2.60	**Convergent**	1	0
5/6/2015	387.25	877.95	299	298.8	0.2	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
5/7/2015	387.92	769.66	299	294.8	4.2	Convergent	Yes	297	299.2	2.2	Convergent	Yes	**Yes**		**Convergent**	1	0
5/8/2015	388.10	789.52	299	293.1	5.9	Convergent	Yes	297	298.8	1.8	Convergent	Yes	**Yes**		**Convergent**	1	0
5/9/2015	389.96	800.00	299	283.6	15.4	Convergent	Yes	297	298.6	1.6	Convergent	Yes	**Yes**		**Convergent**	1	0
5/10/2015	391.82	706.91	299	251.8	47.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/11/2015	392.46	230.17	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/12/2015	393.26	2.09	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/13/2015	394.49	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/14/2015	393.63	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/15/2015	393.51	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/16/2015	393.92	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/17/2015	394.78	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
5/18/2015	395.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/19/2015	397.11	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/20/2015	400.54	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/21/2015	401.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/22/2015	401.21	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/23/2015	400.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/24/2015	399.22	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/25/2015	398.24	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/26/2015	399.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/27/2015	401.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/28/2015	402.73	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/29/2015	403.07	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/30/2015	404.33	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/31/2015	405.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/1/2015	405.74	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/2/2015	404.55	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/3/2015	403.52	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/4/2015	402.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/5/2015	402.23	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/6/2015	402.95	0.57	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/7/2015	404.90	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/8/2015	406.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/9/2015	408.13	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/10/2015	409.13	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/11/2015	408.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/12/2015	406.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/13/2015	404.86	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/14/2015	404.80	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/15/2015	407.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/16/2015	409.44	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/17/2015	411.35	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/18/2015	412.59	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/19/2015	414.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/20/2015	415.65	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/21/2015	415.97	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/22/2015	415.64	0.74	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/23/2015	415.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/24/2015	415.55	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/25/2015	415.10	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/26/2015	415.00	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/27/2015	414.98	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/28/2015	415.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/29/2015	416.43	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/30/2015	416.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/1/2015	416.68	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/2/2015	416.14	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/3/2015	415.87	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/4/2015	415.57	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/5/2015	414.80	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/6/2015	413.55	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/7/2015	411.85	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/8/2015	410.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/9/2015	410.73	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/10/2015	412.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/11/2015	414.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/12/2015	413.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/13/2015	412.58	3.33	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/14/2015	412.52	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/15/2015	412.65	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/16/2015	412.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/17/2015	410.41	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/18/2015	408.56	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/19/2015	407.85	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/20/2015	409.02	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/21/2015	410.48	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/22/2015	411.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/23/2015	410.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/24/2015	409.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/25/2015	407.84	55.38	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
7/26/2015	405.67	500.00	299	Reverse Gradient		Convergent	Yes	297	334.7	37.7	Convergent	Yes	**Yes**		**Convergent**	1	0
7/27/2015	405.09	500.00	299	Reverse Gradient		Convergent	Yes	297	327.9	30.9	Convergent	Yes	**Yes**		**Convergent**	1	0
7/28/2015	405.35	500.00	299	Reverse Gradient		Convergent	Yes	297	330.7	33.7	Convergent	Yes	**Yes**		**Convergent**	1	0
7/29/2015	405.43	409.72	299	Reverse Gradient		Convergent	Yes	297	339.2	42.2	Convergent	Yes	**Yes**		**Convergent**	1	0
7/30/2015	405.41	322.84	299	Reverse Gradient		Convergent	Yes	297	340.1	43.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/31/2015	405.03	482.68	299	Reverse Gradient		Convergent	Yes	297	339.2	42.2	Convergent	Yes	**Yes**		**Convergent**	1	0
8/1/2015	404.33	500.00	299	Reverse Gradient		Convergent	Yes	297	335.3	38.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/2/2015	403.64	500.00	299	Reverse Gradient		Convergent	Yes	297	328.8	31.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/3/2015	402.68	500.00	299	Reverse Gradient		Convergent	Yes	297	322.2	25.2	Convergent	Yes	**Yes**		**Convergent**	1	0
8/4/2015	401.76	500.00	299	Reverse Gradient		Convergent	Yes	297	317.3	20.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/5/2015	400.72	743.17	299	311.7	-12.7	Divergent	No	297	314.4	17.4	Convergent	Yes	**No**	4.73	**Convergent**	1	0
8/6/2015	400.27	899.66	299	299.9	-0.9	Divergent	No	297	315.7	18.7	Convergent	Yes	**No**	17.79	**Convergent**	1	0
8/7/2015	398.66	810.60	299	305.8	-6.8	Divergent	No	297	313.6	16.6	Convergent	Yes	**No**	9.81	**Convergent**	1	0
8/8/2015	397.04	957.97	299	309.1	-10.1	Divergent	No	297	310.0	13.0	Convergent	Yes	**No**	2.83	**Convergent**	1	0
8/9/2015	395.70	1020.05	299	308.0	-9.0	Divergent	No	297	308.1	11.1	Convergent	Yes	**No**	2.15	**Convergent**	1	0
8/10/2015	395.01	1174.66	299	309.2	-10.2	Divergent	No	297	307.2	10.2	Convergent	Yes	**No**	0.06	**Convergent**	1	0
8/11/2015	394.19	1280.43	299	307.6	-8.6	Divergent	No	297	307.9	10.9	Convergent	Yes	**No**	2.34	**Convergent**	1	0
8/12/2015	394.58	1164.14	299	305.4	-6.4	Divergent	No	297	308.3	11.3	Convergent	Yes	**No**	4.91	**Convergent**	1	0
8/13/2015	395.88	875.10	299	303.0	-4.0	Divergent	No	297	307.5	10.5	Convergent	Yes	**No**	6.45	**Convergent**	1	0
8/14/2015	396.73	774.61	299	301.5	-2.5	Divergent	No	297	305.9	8.9	Convergent	Yes	**No**	6.49	**Convergent**	1	0
8/15/2015	395.43	969.10	299	301.4	-2.4	Divergent	No	297	304.9	7.9	Convergent	Yes	**No**	5.51	**Convergent**	1	0
8/16/2015	393.15	1282.22	299	302.7	-3.7	Divergent	No	297	304.8	7.8	Convergent	Yes	**No**	4.15	**Convergent**	1	0
8/17/2015	391.58	1529.57	299	302.6	-3.6	Divergent	No	297	304.6	7.6	Convergent	Yes	**No**	4.03	**Convergent**	1	0
8/18/2015	390.20	1714.69	299	302.7	-3.7	Divergent	No	297	304.4	7.4	Convergent	Yes	**No**	3.69	**Convergent**	1	0
8/19/2015	390.75	1560.53	299	301.0	-2.0	Divergent	No	297	304.4	7.4	Convergent	Yes	**No**	5.40	**Convergent**	1	0
8/20/2015	390.57	1429.16	299	301.1	-2.1	Divergent	No	297	304.6	7.6	Convergent	Yes	**No**	5.52	**Convergent**	1	0
8/21/2015	389.60	1515.43	299	302.7	-3.7	Divergent	No	297	304.5	7.5	Convergent	Yes	**No**	3.76	**Convergent**	1	0
8/22/2015	389.80	1489.49	299	303.2	-4.2	Divergent	No	297	304.0	7.0	Convergent	Yes	**No**	2.87	**Convergent**	1	0
8/23/2015	390.68	1310.90	299	301.1	-2.1	Divergent	No	297	303.7	6.7	Convergent	Yes	**No**	4.59	**Convergent**	1	0
8/24/2015	391.05	1176.25	299	299.9	-0.9	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	5.58	**Convergent**	1	0
8/25/2015	391.29	1109.23	299	299.9	-0.9	Divergent	No	297	303.1	6.1	Convergent	Yes	**No**	5.18	**Convergent**	1	0
8/26/2015	390.62	1195.59	299	300.6	-1.6	Divergent	No	297	303.1	6.1	Convergent	Yes	**No**	4.45	**Convergent**	1	0
8/27/2015	389.61	1395.34	299	301.9	-2.9	Divergent	No	297	303.2	6.2	Convergent	Yes	**No**	3.29	**Convergent**	1	0
8/28/2015	388.90	1496.96	299	301.7	-2.7	Divergent	No	297	303.4	6.4	Convergent	Yes	**No**	3.72	**Convergent**	1	0
8/29/2015	388.20	1579.01	299	301.0	-2.0	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	4.49	**Convergent**	1	0
8/30/2015	388.10	1550.40	299	301.0	-2.0	Divergent	No	297	303.6	6.6	Convergent	Yes	**No**	4.67	**Convergent**	1	0
8/31/2015	387.88	1525.49	299	300.5	-1.5	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	5.05	**Convergent**	1	0
9/1/2015	388.02	1410.20	299	300.5	-1.5	Divergent	No	297	303.3	6.3	Convergent	Yes	**No**	4.88	**Convergent**	1	0
9/2/2015	387.58	1413.61	299	301.0	-2.0	Divergent	No	297	303.6	6.6	Convergent	Yes	**No**	4.55	**Convergent**	1	0
9/3/2015	387.59	1432.96	299	301.0	-2.0	Divergent	No	297	303.3	6.3	Convergent	Yes	**No**	4.32	**Convergent**	1	0
9/4/2015	388.40	1276.57	299	300.5	-1.5	Divergent	No	297	303.1	6.1	Convergent	Yes	**No**	4.53	**Convergent**	1	0
9/5/2015	388.67	1182.45	299	298.6	0.4	Convergent	Yes	297	302.8	5.8	Convergent	Yes	**Yes**		**Convergent**	1	0
9/6/2015	388.38	1200.72	299	298.6	0.4	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/7/2015	388.04	1235.48	299	298.0	1.0	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/8/2015	387.65	1251.33	299	299.3	-0.3	Divergent	No	297	302.5	5.5	Convergent	Yes	**No**	5.15	**Convergent**	1	0
9/9/2015	387.70	1174.98	299	299.3	-0.3	Divergent	No	297	302.4	5.4	Convergent	Yes	**No**	5.13	**Convergent**	1	0
9/10/2015	387.50	1137.29	299	299.9	-0.9	Divergent	No	297	302.4	5.4	Convergent	Yes	**No**	4.52	**Convergent**	1	0
9/11/2015	388.25	968.93	299	300.6	-1.6	Divergent	No	297	302.7	5.7	Convergent	Yes	**No**	4.15	**Convergent**	1	0
9/12/2015	389.71	706.32	299	300.7	-1.7	Divergent	No	297	303.3	6.3	Convergent	Yes	**No**	4.55	**Convergent**	1	0
9/13/2015	390.88	562.18	299	299.9	-0.9	Divergent	No	297	303.7	6.7	Convergent	Yes	**No**	5.80	**Convergent**	1	0
9/14/2015	391.43	495.10	299	298.6	0.4	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/15/2015	390.60	635.53	299	299.9	-0.9	Divergent	No	297	304.1	7.1	Convergent	Yes	**No**	6.17	**Convergent**	1	0
9/16/2015	389.31	883.92	299	301.9	-2.9	Divergent	No	297	303.3	6.3	Convergent	Yes	**No**	3.34	**Convergent**	1	0
9/17/2015	388.97	937.50	299	301.7	-2.7	Divergent	No	297	302.7	5.7	Convergent	Yes	**No**	3.07	**Convergent**	1	0
9/18/2015	388.64	959.61	299	299.9	-0.9	Divergent	No	297	302.7	5.7	Convergent	Yes	**No**	4.75	**Convergent**	1	0
9/19/2015	388.37	1052.28	299	300.7	-1.7	Divergent	No	297	302.6	5.6	Convergent	Yes	**No**	3.95	**Convergent**	1	0
9/20/2015	388.83	958.22	299	299.9	-0.9	Divergent	No	297	302.9	5.9	Convergent	Yes	**No**	4.98	**Convergent**	1	0
9/21/2015	390.02	681.97	299	299.0	0.0	Divergent	No	297	302.9	5.9	Convergent	Yes	**No**	5.83	**Convergent**	1	0
9/22/2015	390.43	662.84	299	298.8	0.2	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/23/2015	389.88	757.75	299	298.8	0.2	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
9/24/2015	388.99	897.29	299	299.9	-0.9	Divergent	No	297	304.2	7.2	Convergent	Yes	**No**	6.29	**Convergent**	1	0
9/25/2015	388.37	999.95	299	300.7	-1.7	Divergent	No	297	303.6	6.6	Convergent	Yes	**No**	4.90	**Convergent**	1	0
9/26/2015	388.08	1029.23	299	300.7	-1.7	Divergent	No	297	303.2	6.2	Convergent	Yes	**No**	4.52	**Convergent**	1	0
9/27/2015	387.54	1076.28	299	300.7	-1.7	Divergent	No	297	303.1	6.1	Convergent	Yes	**No**	4.46	**Convergent**	1	0
9/28/2015	386.52	1264.75	299	302.0	-3.0	Divergent	No	297	303.0	6.0	Convergent	Yes	**No**	3.03	**Convergent**	1	0
9/29/2015	386.23	1332.82	299	301.8	-2.8	Divergent	No	297	302.6	5.6	Convergent	Yes	**No**	2.87	**Convergent**	1	0
9/30/2015	388.01	981.93	299	299.3	-0.3	Divergent	No	297	302.3	5.3	Convergent	Yes	**No**	5.01	**Convergent**	1	0
10/1/2015	388.51	793.63	299	298.2	0.8	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/2/2015	387.80	845.07	299	298.2	0.8	Convergent	Yes	297	302.8	5.8	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
10/3/2015	386.96	993.24	299	299.9	-0.9	Divergent	No	297	302.7	5.7	Convergent	Yes	**No**	4.72	**Convergent**	1	0
10/4/2015	386.01	1205.72	299	300.6	-1.6	Divergent	No	297	302.3	5.3	Convergent	Yes	**No**	3.65	**Convergent**	1	0
10/5/2015	385.54	1301.64	299	300.5	-1.5	Divergent	No	297	302.2	5.2	Convergent	Yes	**No**	3.63	**Convergent**	1	0
10/6/2015	385.46	1306.42	299	299.9	-0.9	Divergent	No	297	301.9	4.9	Convergent	Yes	**No**	4.00	**Convergent**	1	0
10/7/2015	385.12	1290.23	299	299.3	-0.3	Divergent	No	297	301.7	4.7	Convergent	Yes	**No**	4.35	**Convergent**	1	0
10/8/2015	384.74	1314.49	299	298.8	0.2	Convergent	Yes	297	301.7	4.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/9/2015	383.98	1394.46	299	299.9	-0.9	Divergent	No	297	301.9	4.9	Convergent	Yes	**No**	3.94	**Convergent**	1	0
10/10/2015	383.48	1428.00	299	300.5	-1.5	Divergent	No	297	301.8	4.8	Convergent	Yes	**No**	3.39	**Convergent**	1	0
10/11/2015	382.99	1495.06	299	300.4	-1.4	Divergent	No	297	302.0	5.0	Convergent	Yes	**No**	3.59	**Convergent**	1	0
10/12/2015	382.86	1496.16	299	299.9	-0.9	Divergent	No	297	301.8	4.8	Convergent	Yes	**No**	3.88	**Convergent**	1	0
10/13/2015	383.18	1415.75	299	299.4	-0.4	Divergent	No	297	301.6	4.6	Convergent	Yes	**No**	4.17	**Convergent**	1	0
10/14/2015	383.32	1330.53	299	298.9	0.1	Convergent	Yes	297	301.6	4.6	Convergent	Yes	**Yes**		**Convergent**	1	0
10/15/2015	382.97	1111.61	299	299.9	-0.9	Divergent	No	297	301.2	4.2	Convergent	Yes	**No**	3.28	**Convergent**	1	0
10/16/2015	382.85	1422.99	299	300.4	-1.4	Divergent	No	297	300.8	3.8	Convergent	Yes	**No**	2.35	**Convergent**	1	0
10/17/2015	382.28	1429.65	299	299.4	-0.4	Divergent	No	297	301.4	4.4	Convergent	Yes	**No**	3.98	**Convergent**	1	0
10/18/2015	381.75	1449.09	299	299.5	-0.5	Divergent	No	297	301.4	4.4	Convergent	Yes	**No**	3.96	**Convergent**	1	0
10/19/2015	381.63	1410.69	299	299.9	-0.9	Divergent	No	297	301.4	4.4	Convergent	Yes	**No**	3.49	**Convergent**	1	0
10/20/2015	381.69	1436.72	299	300.4	-1.4	Divergent	No	297	301.6	4.6	Convergent	Yes	**No**	3.22	**Convergent**	1	0
10/21/2015	381.79	1415.57	299	299.9	-0.9	Divergent	No	297	301.2	4.2	Convergent	Yes	**No**	3.28	**Convergent**	1	0
10/22/2015	381.80	1391.31	299	299.4	-0.4	Divergent	No	297	301.2	4.2	Convergent	Yes	**No**	3.77	**Convergent**	1	0
10/23/2015	382.16	1338.46	299	298.4	0.6	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/24/2015	382.38	1297.56	299	297.9	1.1	Convergent	Yes	297	301.0	4.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/25/2015	382.11	1293.40	299	297.3	1.7	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/26/2015	381.73	1264.78	299	297.9	1.1	Convergent	Yes	297	301.0	4.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/27/2015	381.40	1255.29	299	298.9	0.1	Convergent	Yes	297	301.0	4.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/28/2015	382.28	1174.22	299	298.4	0.6	Convergent	Yes	297	301.0	4.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/29/2015	382.90	433.26	299	301.6	-2.6	Divergent	No	297	299.5	2.5	Convergent	Yes	**No**	-0.16	**Divergent**	0	1
10/30/2015	383.08	1109.50	299	303.0	-4.0	Divergent	No	297	299.1	2.1	Convergent	Yes	**No**	-1.85	**Divergent**	0	1
10/31/2015	383.63	1037.24	299	298.1	0.9	Convergent	Yes	297	300.6	3.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/1/2015	384.30	965.75	299	295.8	3.2	Convergent	Yes	297	300.6	3.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/2/2015	384.70	258.87	299	299.1	-0.1	Divergent	No	297	299.1	2.1	Convergent	Yes	**No**	1.99	**Convergent**	1	0
11/3/2015	384.93	0.00	299	310.2	-11.2	Divergent	No	297	296.8	-0.2	Divergent	No	**No**	-11.49	**Divergent**	0	1
11/4/2015	385.77	707.15	299	311.1	-12.1	Divergent	No	297	297.4	0.4	Convergent	Yes	**No**	-11.73	**Divergent**	0	1
11/5/2015	386.71	996.95	299	299.9	-0.9	Divergent	No	297	301.2	4.2	Convergent	Yes	**No**	3.28	**Convergent**	1	0
11/6/2015	386.75	540.25	299	292.2	6.8	Convergent	Yes	297	303.3	6.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/7/2015	386.28	559.50	299	295.2	3.8	Convergent	Yes	297	303.1	6.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/8/2015	386.10	577.51	299	295.6	3.4	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/9/2015	385.90	371.45	299	299.9	-0.9	Divergent	No	297	301.6	4.6	Convergent	Yes	**No**	3.70	**Convergent**	1	0
11/10/2015	385.55	558.78	299	304.1	-5.1	Divergent	No	297	300.4	3.4	Convergent	Yes	**No**	-1.64	**Divergent**	0	1
11/11/2015	385.73	792.35	299	300.9	-1.9	Divergent	No	297	301.6	4.6	Convergent	Yes	**No**	2.67	**Convergent**	1	0
11/12/2015	386.11	462.80	299	299.9	-0.9	Divergent	No	297	301.6	4.6	Convergent	Yes	**No**	3.69	**Convergent**	1	0
11/13/2015	385.32	794.21	299	299.9	-0.9	Divergent	No	297	301.2	4.2	Convergent	Yes	**No**	3.28	**Convergent**	1	0
11/14/2015	384.92	796.49	299	296.1	2.9	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/15/2015	385.02	763.11	299	296.2	2.8	Convergent	Yes	297	302.3	5.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/16/2015	385.11	730.97	299	297.1	1.9	Convergent	Yes	297	302.7	5.7	Convergent	Yes	**Yes**		**Convergent**	1	0
11/17/2015	386.50	533.54	299	296.8	2.2	Convergent	Yes	297	302.9	5.9	Convergent	Yes	**Yes**		**Convergent**	1	0
11/18/2015	391.85	178.69	299	288.7	10.3	Convergent	Yes	297	305.6	8.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/19/2015	397.72	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/20/2015	398.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/21/2015	398.03	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/22/2015	397.35	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/23/2015	395.78	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/24/2015	394.62	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/25/2015	394.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/26/2015	394.00	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/27/2015	394.16	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/28/2015	397.04	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/29/2015	402.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
11/30/2015	405.19	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/1/2015	405.55	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/2/2015	405.76	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/3/2015	405.77	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/4/2015	405.34	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/5/2015	404.63	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/6/2015	403.35	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/7/2015	401.31	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/8/2015	399.34	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/9/2015	398.50	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/10/2015	397.57	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
12/11/2015	396.65	204.65	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/12/2015	395.87	500.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/13/2015	395.25	500.00	299	Reverse Gradient		Convergent	Yes	297	352.2	55.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/14/2015	395.75	364.62	299	Reverse Gradient		Convergent	Yes	297	351.8	54.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/15/2015	400.49	3.46	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/16/2015	405.22	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/17/2015	408.10	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/18/2015	409.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/19/2015	409.88	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/20/2015	409.70	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/21/2015	408.77	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/22/2015	407.35	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/23/2015	406.61	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/24/2015	406.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/25/2015	406.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/26/2015	406.97	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/27/2015	411.46	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/28/2015	415.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/29/2015	419.39	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/30/2015	421.19	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
12/31/2015	422.23	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
															2015 Totals	355	10
															2015 % Convergent	**97%**	

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
1/1/2016	422.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/2/2016	420.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/3/2016	417.92	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/4/2016	415.00	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/5/2016	412.16	2.92	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/6/2016	409.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/7/2016	408.03	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/8/2016	406.77	21.10	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/9/2016	405.92	288.21	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/10/2016	406.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/11/2016	407.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/12/2016	407.55	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/13/2016	406.69	10.69	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/14/2016	405.03	493.02	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/15/2016	402.86	500.00	299	Reverse Gradient		Convergent	Yes	297	332.2	35.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/16/2016	402.05	500.00	299	Reverse Gradient		Convergent	Yes	297	318.3	21.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/17/2016	401.30	500.00	299	Reverse Gradient		Convergent	Yes	297	315.4	18.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/18/2016	400.09	609.32	299	Reverse Gradient		Convergent	Yes	297	311.5	14.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/19/2016	397.68	842.30	299	303.1	-4.1	Divergent	No	297	306.5	9.5	Convergent	Yes	**No**	5.39	**Convergent**	1	0
1/20/2016	396.08	997.62	299	305.6	-6.6	Divergent	No	297	304.4	7.4	Convergent	Yes	**No**	0.82	**Convergent**	1	0
1/21/2016	397.61	804.15	299	301.3	-2.3	Divergent	No	297	305.7	8.7	Convergent	Yes	**No**	6.38	**Convergent**	1	0
1/22/2016	397.70	744.15	299	299.9	-0.9	Divergent	No	297	307.2	10.2	Convergent	Yes	**No**	9.25	**Convergent**	1	0
1/23/2016	396.05	927.60	299	303.0	-4.0	Divergent	No	297	306.3	9.3	Convergent	Yes	**No**	5.28	**Convergent**	1	0
1/24/2016	395.44	959.86	299	304.6	-5.6	Divergent	No	297	305.1	8.1	Convergent	Yes	**No**	2.48	**Convergent**	1	0
1/25/2016	394.92	984.40	299	305.1	-6.1	Divergent	No	297	304.8	7.8	Convergent	Yes	**No**	1.72	**Convergent**	1	0
1/26/2016	395.12	894.67	299	305.3	-6.3	Divergent	No	297	305.2	8.2	Convergent	Yes	**No**	1.97	**Convergent**	1	0
1/27/2016	395.03	903.93	299	304.6	-5.6	Divergent	No	297	305.1	8.1	Convergent	Yes	**No**	2.53	**Convergent**	1	0
1/28/2016	395.07	901.67	299	303.3	-4.3	Divergent	No	297	304.5	7.5	Convergent	Yes	**No**	3.18	**Convergent**	1	0
1/29/2016	395.05	842.33	299	303.3	-4.3	Divergent	No	297	305.3	8.3	Convergent	Yes	**No**	3.92	**Convergent**	1	0
1/30/2016	394.78	869.70	299	305.6	-6.6	Divergent	No	297	305.9	8.9	Convergent	Yes	**No**	2.34	**Convergent**	1	0
1/31/2016	394.54	901.66	299	306.3	-7.3	Divergent	No	297	305.5	8.5	Convergent	Yes	**No**	1.21	**Convergent**	1	0
2/1/2016	394.20	940.01	299	304.3	-5.3	Divergent	No	297	305.2	8.2	Convergent	Yes	**No**	2.88	**Convergent**	1	0
2/2/2016	393.75	955.66	299	304.2	-5.2	Divergent	No	297	304.1	7.1	Convergent	Yes	**No**	1.89	**Convergent**	1	0
2/3/2016	394.23	837.72	299	304.3	-5.3	Divergent	No	297	303.8	6.8	Convergent	Yes	**No**	1.44	**Convergent**	1	0
2/4/2016	395.21	651.27	299	305.8	-6.8	Divergent	No	297	304.3	7.3	Convergent	Yes	**No**	0.49	**Convergent**	1	0
2/5/2016	396.27	620.84	299	302.0	-3.0	Divergent	No	297	305.3	8.3	Convergent	Yes	**No**	5.33	**Convergent**	1	0
2/6/2016	396.98	543.06	299	296.8	2.2	Convergent	Yes	297	309.0	12.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/7/2016	396.37	544.00	299	299.9	-0.9	Divergent	No	297	308.6	11.6	Convergent	Yes	**No**	10.69	**Convergent**	1	0
2/8/2016	395.05	759.95	299	305.8	-6.8	Divergent	No	297	306.1	9.1	Convergent	Yes	**No**	2.32	**Convergent**	1	0
2/9/2016	393.64	986.34	299	305.1	-6.1	Divergent	No	297	305.8	8.8	Convergent	Yes	**No**	2.65	**Convergent**	1	0
2/10/2016	392.64	1038.65	299	305.0	-6.0	Divergent	No	297	306.7	9.7	Convergent	Yes	**No**	3.72	**Convergent**	1	0
2/11/2016	390.70	1357.80	299	305.5	-6.5	Divergent	No	297	305.8	8.8	Convergent	Yes	**No**	2.25	**Convergent**	1	0
2/12/2016	391.09	1213.85	299	305.0	-6.0	Divergent	No	297	304.7	7.7	Convergent	Yes	**No**	1.79	**Convergent**	1	0
2/13/2016	390.31	1243.64	299	304.3	-5.3	Divergent	No	297	304.3	7.3	Convergent	Yes	**No**	1.96	**Convergent**	1	0
2/14/2016	389.20	1448.89	299	304.5	-5.5	Divergent	No	297	304.0	7.0	Convergent	Yes	**No**	1.52	**Convergent**	1	0
2/15/2016	389.03	1411.44	299	303.4	-4.4	Divergent	No	297	303.6	6.6	Convergent	Yes	**No**	2.16	**Convergent**	1	0
2/16/2016	388.36	1412.31	299	303.3	-4.3	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	2.20	**Convergent**	1	0
2/17/2016	388.14	1400.28	299	304.3	-5.3	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	1.13	**Convergent**	1	0
2/18/2016	388.99	1147.74	299	303.4	-4.4	Divergent	No	297	303.3	6.3	Convergent	Yes	**No**	1.95	**Convergent**	1	0
2/19/2016	390.40	785.78	299	302.7	-3.7	Divergent	No	297	302.9	5.9	Convergent	Yes	**No**	2.20	**Convergent**	1	0
2/20/2016	390.69	776.18	299	302.4	-3.4	Divergent	No	297	302.8	5.8	Convergent	Yes	**No**	2.37	**Convergent**	1	0
2/21/2016	391.75	684.35	299	302.9	-3.9	Divergent	No	297	302.7	5.7	Convergent	Yes	**No**	1.82	**Convergent**	1	0
2/22/2016	391.65	694.87	299	302.2	-3.2	Divergent	No	297	302.4	5.4	Convergent	Yes	**No**	2.25	**Convergent**	1	0
2/23/2016	392.42	626.54	299	303.7	-4.7	Divergent	No	297	303.0	6.0	Convergent	Yes	**No**	1.28	**Convergent**	1	0
2/24/2016	394.00	455.33	299	301.5	-2.5	Divergent	No	297	304.0	7.0	Convergent	Yes	**No**	4.43	**Convergent**	1	0
2/25/2016	395.05	500.00	299	297.0	2.0	Convergent	Yes	297	309.0	12.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/26/2016	395.85	500.00	299	270.4	28.6	Convergent	Yes	297	323.3	26.3	Convergent	Yes	**Yes**		**Convergent**	1	0
2/27/2016	395.74	500.00	299	246.4	52.6	Convergent	Yes	297	333.6	36.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/28/2016	395.44	500.00	299	256.7	42.3	Convergent	Yes	297	325.8	28.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/29/2016	394.54	500.00	299	287.4	11.6	Convergent	Yes	297	315.5	18.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/1/2016	393.77	577.39	299	302.4	-3.4	Divergent	No	297	308.9	11.9	Convergent	Yes	**No**	8.45	**Convergent**	1	0
3/2/2016	393.71	559.73	299	304.1	-5.1	Divergent	No	297	306.8	9.8	Convergent	Yes	**No**	4.70	**Convergent**	1	0
3/3/2016	394.02	531.70	299	304.3	-5.3	Divergent	No	297	307.0	10.0	Convergent	Yes	**No**	4.70	**Convergent**	1	0
3/4/2016	393.85	500.00	299	307.0	-8.0	Divergent	No	297	307.3	10.3	Convergent	Yes	**No**	2.33	**Convergent**	1	0
3/5/2016	393.47	580.70	299	306.5	-7.5	Divergent	No	297	306.9	9.9	Convergent	Yes	**No**	2.36	**Convergent**	1	0
3/6/2016	392.86	644.70	299	305.5	-6.5	Divergent	No	297	305.1	8.1	Convergent	Yes	**No**	1.59	**Convergent**	1	0
3/7/2016	392.74	689.99	299	301.5	-2.5	Divergent	No	297	303.8	6.8	Convergent	Yes	**No**	4.28	**Convergent**	1	0
3/8/2016	392.63	688.64	299	299.9	-0.9	Divergent	No	297	304.2	7.2	Convergent	Yes	**No**	6.31	**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
3/9/2016	392.35	659.02	299	301.4	-2.4	Divergent	No	297	304.5	7.5	Convergent	Yes	**No**	5.16	**Convergent**	1	0
3/10/2016	392.77	586.34	299	303.0	-4.0	Divergent	No	297	305.1	8.1	Convergent	Yes	**No**	4.09	**Convergent**	1	0
3/11/2016	392.43	615.13	299	305.0	-6.0	Divergent	No	297	304.8	7.8	Convergent	Yes	**No**	1.84	**Convergent**	1	0
3/12/2016	391.80	731.92	299	302.7	-3.7	Divergent	No	297	304.4	7.4	Convergent	Yes	**No**	3.70	**Convergent**	1	0
3/13/2016	391.79	740.58	299	301.2	-2.2	Divergent	No	297	303.8	6.8	Convergent	Yes	**No**	4.64	**Convergent**	1	0
3/14/2016	392.08	682.93	299	299.9	-0.9	Divergent	No	297	303.5	6.5	Convergent	Yes	**No**	5.57	**Convergent**	1	0
3/15/2016	392.48	625.68	299	299.9	-0.9	Divergent	No	297	303.2	6.2	Convergent	Yes	**No**	5.29	**Convergent**	1	0
3/16/2016	393.20	541.67	299	298.2	0.8	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
3/17/2016	393.63	500.00	299	295.6	3.4	Convergent	Yes	297	307.6	10.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/18/2016	394.23	500.00	299	289.6	9.4	Convergent	Yes	297	310.4	13.4	Convergent	Yes	**Yes**		**Convergent**	1	0
3/19/2016	395.10	500.00	299	277.5	21.5	Convergent	Yes	297	315.8	18.8	Convergent	Yes	**Yes**		**Convergent**	1	0
3/20/2016	395.86	500.00	299	236.0	63.0	Convergent	Yes	297	328.5	31.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/21/2016	396.37	500.00	299	Reverse Gradient		Convergent	Yes	297	353.5	56.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/22/2016	396.29	500.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/23/2016	395.92	500.00	299	Reverse Gradient		Convergent	Yes	297	344.3	47.3	Convergent	Yes	**Yes**		**Convergent**	1	0
3/24/2016	395.58	500.00	299	236.0	63.0	Convergent	Yes	297	329.5	32.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/25/2016	395.30	500.00	299	246.4	52.6	Convergent	Yes	297	323.6	26.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/26/2016	395.20	500.00	299	260.6	38.4	Convergent	Yes	297	321.3	24.3	Convergent	Yes	**Yes**		**Convergent**	1	0
3/27/2016	395.26	500.00	299	260.6	38.4	Convergent	Yes	297	320.6	23.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/28/2016	395.83	500.00	299	240.6	58.4	Convergent	Yes	297	324.5	27.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/29/2016	396.47	349.72	299	Reverse Gradient		Convergent	Yes	297	309.2	12.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/30/2016	397.15	0.00	299	Reverse Gradient		Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
3/31/2016	398.52	0.16	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/1/2016	399.22	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/2/2016	399.45	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/3/2016	399.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/4/2016	398.91	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/5/2016	398.46	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/6/2016	398.06	353.98	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/7/2016	397.86	900.00	299	10.8	288.2	Divergent	No	297	Reverse Gradient	>=90	Convergent	Yes	**No**	-198.21	**Divergent**	0	1
4/8/2016	397.58	663.53	299	253.3	45.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/9/2016	397.34	500.00	299	333.2	-34.2	Divergent	No	297	Reverse Gradient	>=90	Convergent	Yes	**No**	55.75	**Convergent**	1	0
4/10/2016	397.31	500.00	299	339.9	-40.9	Divergent	No	297	Reverse Gradient	>=90	Convergent	Yes	**No**	49.09	**Convergent**	1	0
4/11/2016	397.98	266.21	299	305.8	-6.8	Divergent	No	297	Reverse Gradient	>=90	Convergent	Yes	**No**	83.21	**Convergent**	1	0
4/12/2016	398.21	52.02	299	268.4	30.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/13/2016	398.09	164.15	299	267.0	32.0	Convergent	Yes	297	349.6	52.6	Convergent	Yes	**Yes**		**Convergent**	1	0
4/14/2016	397.91	221.01	299	270.4	28.6	Convergent	Yes	297	340.4	43.4	Convergent	Yes	**Yes**		**Convergent**	1	0
4/15/2016	397.33	298.48	299	274.3	24.7	Convergent	Yes	297	332.1	35.1	Convergent	Yes	**Yes**		**Convergent**	1	0
4/16/2016	396.64	371.16	299	276.6	22.4	Convergent	Yes	297	325.8	28.8	Convergent	Yes	**Yes**		**Convergent**	1	0
4/17/2016	395.93	445.42	299	278.5	20.5	Convergent	Yes	297	321.3	24.3	Convergent	Yes	**Yes**		**Convergent**	1	0
4/18/2016	394.93	565.48	299	280.7	18.3	Convergent	Yes	297	317.6	20.6	Convergent	Yes	**Yes**		**Convergent**	1	0
4/19/2016	393.90	711.97	299	284.3	14.7	Convergent	Yes	297	314.4	17.4	Convergent	Yes	**Yes**		**Convergent**	1	0
4/20/2016	393.38	793.45	299	286.8	12.2	Convergent	Yes	297	313.1	16.1	Convergent	Yes	**Yes**		**Convergent**	1	0
4/21/2016	393.18	801.55	299	287.1	11.9	Convergent	Yes	297	313.0	16.0	Convergent	Yes	**Yes**		**Convergent**	1	0
4/22/2016	392.64	877.12	299	287.0	12.0	Convergent	Yes	297	313.3	16.3	Convergent	Yes	**Yes**		**Convergent**	1	0
4/23/2016	392.00	953.34	299	287.8	11.2	Convergent	Yes	297	312.3	15.3	Convergent	Yes	**Yes**		**Convergent**	1	0
4/24/2016	391.23	1001.01	299	286.8	12.2	Convergent	Yes	297	309.7	12.7	Convergent	Yes	**Yes**		**Convergent**	1	0
4/25/2016	391.36	1000.05	299	285.4	13.6	Convergent	Yes	297	307.0	10.0	Convergent	Yes	**Yes**		**Convergent**	1	0
4/26/2016	392.80	824.53	299	282.2	16.8	Convergent	Yes	297	308.2	11.2	Convergent	Yes	**Yes**		**Convergent**	1	0
4/27/2016	393.88	583.93	299	278.2	20.8	Convergent	Yes	297	312.5	15.5	Convergent	Yes	**Yes**		**Convergent**	1	0
4/28/2016	394.06	496.93	299	276.6	22.4	Convergent	Yes	297	316.2	19.2	Convergent	Yes	**Yes**		**Convergent**	1	0
4/29/2016	394.29	499.36	299	276.7	22.3	Convergent	Yes	297	318.0	21.0	Convergent	Yes	**Yes**		**Convergent**	1	0
4/30/2016	399.17	48.65	299	251.7	47.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/1/2016	403.05	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/2/2016	402.54	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/3/2016	401.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/4/2016	402.32	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/5/2016	402.84	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/6/2016	402.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/7/2016	402.24	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/8/2016	401.62	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/9/2016	401.28	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/10/2016	401.49	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/11/2016	402.10	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/12/2016	403.39	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/13/2016	403.78	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/14/2016	403.87	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/15/2016	404.11	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/16/2016	403.46	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
5/17/2016	402.64	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/18/2016	402.14	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/19/2016	401.11	0.00	299	233.3	65.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/20/2016	399.87	433.82	299	257.0	42.0	Convergent	Yes	297	347.1	50.1	Convergent	Yes	**Yes**		**Convergent**	1	0
5/21/2016	399.12	500.00	299	260.1	38.9	Convergent	Yes	297	337.8	40.8	Convergent	Yes	**Yes**		**Convergent**	1	0
5/22/2016	398.55	362.27	299	264.2	34.8	Convergent	Yes	297	333.3	36.3	Convergent	Yes	**Yes**		**Convergent**	1	0
5/23/2016	397.51	368.90	299	274.4	24.6	Convergent	Yes	297	322.8	25.8	Convergent	Yes	**Yes**		**Convergent**	1	0
5/24/2016	396.75	449.22	299	282.6	16.4	Convergent	Yes	297	316.4	19.4	Convergent	Yes	**Yes**		**Convergent**	1	0
5/25/2016	396.35	487.09	299	283.1	15.9	Convergent	Yes	297	315.0	18.0	Convergent	Yes	**Yes**		**Convergent**	1	0
5/26/2016	396.42	463.80	299	283.6	15.4	Convergent	Yes	297	315.3	18.3	Convergent	Yes	**Yes**		**Convergent**	1	0
5/27/2016	396.46	455.63	299	281.9	17.1	Convergent	Yes	297	315.7	18.7	Convergent	Yes	**Yes**		**Convergent**	1	0
5/28/2016	398.55	206.97	299	277.5	21.5	Convergent	Yes	297	320.3	23.3	Convergent	Yes	**Yes**		**Convergent**	1	0
5/29/2016	401.95	0.00	299	251.0	48.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/30/2016	403.93	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/31/2016	404.88	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/1/2016	404.95	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/2/2016	404.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/3/2016	402.82	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/4/2016	401.72	0.00	299	216.9	82.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/5/2016	400.76	131.75	299	257.9	41.1	Convergent	Yes	297	350.0	53.0	Convergent	Yes	**Yes**		**Convergent**	1	0
6/6/2016	399.78	500.00	299	262.3	36.7	Convergent	Yes	297	337.1	40.1	Convergent	Yes	**Yes**		**Convergent**	1	0
6/7/2016	399.36	500.00	299	258.8	40.2	Convergent	Yes	297	337.5	40.5	Convergent	Yes	**Yes**		**Convergent**	1	0
6/8/2016	399.41	500.00	299	259.3	39.7	Convergent	Yes	297	340.9	43.9	Convergent	Yes	**Yes**		**Convergent**	1	0
6/9/2016	399.05	423.05	299	260.1	38.9	Convergent	Yes	297	339.7	42.7	Convergent	Yes	**Yes**		**Convergent**	1	0
6/10/2016	398.18	301.35	299	269.4	29.6	Convergent	Yes	297	327.9	30.9	Convergent	Yes	**Yes**		**Convergent**	1	0
6/11/2016	397.71	361.57	299	278.8	20.2	Convergent	Yes	297	319.9	22.9	Convergent	Yes	**Yes**		**Convergent**	1	0
6/12/2016	397.73	346.83	299	279.8	19.2	Convergent	Yes	297	319.1	22.1	Convergent	Yes	**Yes**		**Convergent**	1	0
6/13/2016	397.53	366.70	299	280.5	18.5	Convergent	Yes	297	318.7	21.7	Convergent	Yes	**Yes**		**Convergent**	1	0
6/14/2016	397.18	390.50	299	281.1	17.9	Convergent	Yes	297	317.6	20.6	Convergent	Yes	**Yes**		**Convergent**	1	0
6/15/2016	397.24	377.20	299	281.1	17.9	Convergent	Yes	297	317.7	20.7	Convergent	Yes	**Yes**		**Convergent**	1	0
6/16/2016	397.19	373.02	299	281.1	17.9	Convergent	Yes	297	318.4	21.4	Convergent	Yes	**Yes**		**Convergent**	1	0
6/17/2016	397.34	339.48	299	279.5	19.5	Convergent	Yes	297	319.1	22.1	Convergent	Yes	**Yes**		**Convergent**	1	0
6/18/2016	397.59	295.83	299	279.2	19.8	Convergent	Yes	297	320.8	23.8	Convergent	Yes	**Yes**		**Convergent**	1	0
6/19/2016	398.18	222.00	299	276.9	22.1	Convergent	Yes	297	324.1	27.1	Convergent	Yes	**Yes**		**Convergent**	1	0
6/20/2016	398.10	235.57	299	275.0	24.0	Convergent	Yes	297	325.8	28.8	Convergent	Yes	**Yes**		**Convergent**	1	0
6/21/2016	397.69	288.65	299	278.0	21.0	Convergent	Yes	297	323.6	26.6	Convergent	Yes	**Yes**		**Convergent**	1	0
6/22/2016	397.22	349.62	299	279.2	19.8	Convergent	Yes	297	320.4	23.4	Convergent	Yes	**Yes**		**Convergent**	1	0
6/23/2016	397.03	367.75	299	279.1	19.9	Convergent	Yes	297	319.6	22.6	Convergent	Yes	**Yes**		**Convergent**	1	0
6/24/2016	397.67	266.21	299	277.5	21.5	Convergent	Yes	297	321.3	24.3	Convergent	Yes	**Yes**		**Convergent**	1	0
6/25/2016	398.89	0.00	299	277.5	21.5	Convergent	Yes	297	327.2	30.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/26/2016	398.18	158.63	299	279.8	19.2	Convergent	Yes	297	327.2	30.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/27/2016	396.77	380.64	299	282.5	16.5	Convergent	Yes	297	320.3	23.3	Convergent	Yes	**Yes**		**Convergent**	1	0
6/28/2016	395.65	488.42	299	283.1	15.9	Convergent	Yes	297	316.6	19.6	Convergent	Yes	**Yes**		**Convergent**	1	0
6/29/2016	394.52	599.76	299	285.9	13.1	Convergent	Yes	297	313.9	16.9	Convergent	Yes	**Yes**		**Convergent**	1	0
6/30/2016	393.96	643.47	299	288.7	10.3	Convergent	Yes	297	311.9	14.9	Convergent	Yes	**Yes**		**Convergent**	1	0
7/1/2016	393.58	667.83	299	290.1	8.9	Convergent	Yes	297	311.3	14.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/2/2016	392.65	752.55	299	291.4	7.6	Convergent	Yes	297	310.3	13.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/3/2016	392.55	783.99	299	291.9	7.1	Convergent	Yes	297	310.5	13.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/4/2016	394.28	585.71	299	288.3	10.7	Convergent	Yes	297	312.4	15.4	Convergent	Yes	**Yes**		**Convergent**	1	0
7/5/2016	397.98	53.83	299	277.0	22.0	Convergent	Yes	297	321.3	24.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/6/2016	397.86	205.23	299	263.2	35.8	Convergent	Yes	297	340.5	43.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/7/2016	397.42	216.20	299	267.0	32.0	Convergent	Yes	297	334.5	37.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/8/2016	397.78	411.80	299	266.1	32.9	Convergent	Yes	297	334.9	37.9	Convergent	Yes	**Yes**		**Convergent**	1	0
7/9/2016	397.93	343.70	299	261.0	38.0	Convergent	Yes	297	342.5	45.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/10/2016	397.48	349.12	299	261.0	38.0	Convergent	Yes	297	338.9	41.9	Convergent	Yes	**Yes**		**Convergent**	1	0
7/11/2016	395.47	444.57	299	274.7	24.3	Convergent	Yes	297	324.3	27.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/12/2016	393.17	721.85	299	287.2	11.8	Convergent	Yes	297	314.3	17.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/13/2016	392.10	849.12	299	291.9	7.1	Convergent	Yes	297	311.8	14.8	Convergent	Yes	**Yes**		**Convergent**	1	0
7/14/2016	391.90	858.35	299	292.0	7.0	Convergent	Yes	297	311.3	14.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/15/2016	393.35	662.42	299	288.7	10.3	Convergent	Yes	297	312.5	15.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/16/2016	395.45	345.54	299	281.3	17.7	Convergent	Yes	297	316.4	19.4	Convergent	Yes	**Yes**		**Convergent**	1	0
7/17/2016	394.64	442.83	299	278.2	20.8	Convergent	Yes	297	319.0	22.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/18/2016	392.97	637.92	299	283.6	15.4	Convergent	Yes	297	314.7	17.7	Convergent	Yes	**Yes**		**Convergent**	1	0
7/19/2016	391.27	866.59	299	289.3	9.7	Convergent	Yes	297	312.1	15.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/20/2016	392.24	769.49	299	290.0	9.0	Convergent	Yes	297	311.9	14.9	Convergent	Yes	**Yes**		**Convergent**	1	0
7/21/2016	393.13	577.26	299	285.4	13.6	Convergent	Yes	297	313.3	16.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/22/2016	393.26	585.73	299	282.9	16.1	Convergent	Yes	297	314.1	17.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/23/2016	395.30	335.01	299	278.1	20.9	Convergent	Yes	297	317.2	20.2	Convergent	Yes	**Yes**		**Convergent**	1	0
7/24/2016	397.53	0.00	299	266.3	32.7	Convergent	Yes	297	331.6	34.6	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
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Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
7/25/2016	398.30	0.00	299	253.3	45.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/26/2016	398.27	0.00	299	251.0	48.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/27/2016	397.32	283.75	299	259.4	39.6	Convergent	Yes	297	353.0	56.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/28/2016	396.57	250.13	299	269.3	29.7	Convergent	Yes	297	334.1	37.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/29/2016	396.17	306.63	299	275.3	23.7	Convergent	Yes	297	326.0	29.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/30/2016	395.83	340.90	299	277.1	21.9	Convergent	Yes	297	323.3	26.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/31/2016	395.42	384.67	299	278.5	20.5	Convergent	Yes	297	321.3	24.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/1/2016	395.10	410.40	299	278.8	20.2	Convergent	Yes	297	320.2	23.2	Convergent	Yes	**Yes**		**Convergent**	1	0
8/2/2016	395.20	404.40	299	279.4	19.6	Convergent	Yes	297	319.5	22.5	Convergent	Yes	**Yes**		**Convergent**	1	0
8/3/2016	399.73	38.39	299	261.1	37.9	Convergent	Yes	297	340.6	43.6	Convergent	Yes	**Yes**		**Convergent**	1	0
8/4/2016	401.76	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/5/2016	400.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/6/2016	399.93	0.00	299	220.0	79.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/7/2016	399.00	34.52	299	243.8	55.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
8/8/2016	397.62	400.76	299	261.6	37.4	Convergent	Yes	297	341.5	44.5	Convergent	Yes	**Yes**		**Convergent**	1	0
8/9/2016	396.18	369.58	299	270.4	28.6	Convergent	Yes	297	327.9	30.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/10/2016	393.98	596.23	299	283.2	15.8	Convergent	Yes	297	318.3	21.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/11/2016	391.96	833.95	299	290.3	8.7	Convergent	Yes	297	313.7	16.7	Convergent	Yes	**Yes**		**Convergent**	1	0
8/12/2016	391.23	924.05	299	293.1	5.9	Convergent	Yes	297	312.0	15.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/13/2016	391.80	837.89	299	292.5	6.5	Convergent	Yes	297	312.4	15.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/14/2016	392.97	649.74	299	288.1	10.9	Convergent	Yes	297	314.0	17.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/15/2016	395.61	244.27	299	279.4	19.6	Convergent	Yes	297	323.0	26.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/16/2016	395.13	311.67	299	273.3	25.7	Convergent	Yes	297	334.4	37.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/17/2016	393.79	517.82	299	280.5	18.5	Convergent	Yes	297	330.6	33.6	Convergent	Yes	**Yes**		**Convergent**	1	0
8/18/2016	393.31	619.47	299	285.8	13.2	Convergent	Yes	297	325.8	28.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/19/2016	393.33	630.73	299	287.3	11.7	Convergent	Yes	297	324.7	27.7	Convergent	Yes	**Yes**		**Convergent**	1	0
8/20/2016	392.70	708.52	299	288.1	10.9	Convergent	Yes	297	323.4	26.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/21/2016	392.04	769.58	299	289.1	9.9	Convergent	Yes	297	321.8	24.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/22/2016	391.64	764.08	299	288.9	10.1	Convergent	Yes	297	320.9	23.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/23/2016	391.78	744.76	299	288.1	10.9	Convergent	Yes	297	320.8	23.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/24/2016	391.98	767.80	299	287.7	11.3	Convergent	Yes	297	321.1	24.1	Convergent	Yes	**Yes**		**Convergent**	1	0
8/25/2016	392.07	745.72	299	287.8	11.2	Convergent	Yes	297	321.3	24.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/26/2016	392.14	712.23	299	287.4	11.6	Convergent	Yes	297	321.8	24.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/27/2016	392.50	675.02	299	286.3	12.7	Convergent	Yes	297	322.6	25.6	Convergent	Yes	**Yes**		**Convergent**	1	0
8/28/2016	394.39	439.97	299	282.2	16.8	Convergent	Yes	297	326.1	29.1	Convergent	Yes	**Yes**		**Convergent**	1	0
8/29/2016	395.80	269.31	299	273.7	25.3	Convergent	Yes	297	333.9	36.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/30/2016	398.54	0.00	299	259.5	39.5	Convergent	Yes	297	351.4	54.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/31/2016	399.09	0.00	299	233.1	65.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/1/2016	398.30	0.00	299	240.2	58.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/2/2016	397.93	3.33	299	257.9	41.1	Convergent	Yes	297	353.2	56.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/3/2016	398.48	0.00	299	262.6	36.4	Convergent	Yes	297	350.3	53.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/4/2016	399.17	0.00	299	255.7	43.3	Convergent	Yes	297	357.2	60.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/5/2016	398.70	62.29	299	254.5	44.5	Convergent	Yes	297	356.2	59.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/6/2016	397.36	392.04	299	263.2	35.8	Convergent	Yes	297	347.1	50.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/7/2016	395.82	391.58	299	272.3	26.7	Convergent	Yes	297	336.3	39.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/8/2016	394.31	558.12	299	281.9	17.1	Convergent	Yes	297	328.5	31.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/9/2016	394.13	573.04	299	284.3	14.7	Convergent	Yes	297	325.5	28.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/10/2016	396.97	242.51	299	277.9	21.1	Convergent	Yes	297	331.8	34.8	Convergent	Yes	**Yes**		**Convergent**	1	0
9/11/2016	401.79	0.00	299	228.8	70.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/12/2016	400.86	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/13/2016	398.59	447.72	299	226.3	72.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/14/2016	397.65	407.12	299	257.6	41.4	Convergent	Yes	297	347.1	50.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/15/2016	396.65	370.92	299	271.4	27.6	Convergent	Yes	297	338.0	41.0	Convergent	Yes	**Yes**		**Convergent**	1	0
9/16/2016	396.52	404.28	299	277.3	21.7	Convergent	Yes	297	332.5	35.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/17/2016	400.65	113.94	299	259.5	39.5	Convergent	Yes	297	346.4	49.4	Convergent	Yes	**Yes**		**Convergent**	1	0
9/18/2016	403.73	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/19/2016	401.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/20/2016	399.95	232.44	299	224.2	74.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
9/21/2016	399.45	395.85	299	252.3	46.7	Convergent	Yes	297	349.7	52.7	Convergent	Yes	**Yes**		**Convergent**	1	0
9/22/2016	400.24	0.00	299	254.4	44.6	Convergent	Yes	297	349.5	52.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/23/2016	399.90	315.75	299	257.9	41.1	Convergent	Yes	297	348.6	51.6	Convergent	Yes	**Yes**		**Convergent**	1	0
9/24/2016	399.35	500.00	299	256.0	43.0	Convergent	Yes	297	346.9	49.9	Convergent	Yes	**Yes**		**Convergent**	1	0
9/25/2016	398.94	480.92	299	255.6	43.4	Convergent	Yes	297	345.8	48.8	Convergent	Yes	**Yes**		**Convergent**	1	0
9/26/2016	398.32	297.47	299	264.4	34.6	Convergent	Yes	297	340.4	43.4	Convergent	Yes	**Yes**		**Convergent**	1	0
9/27/2016	397.53	403.67	299	275.1	23.9	Convergent	Yes	297	334.2	37.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/28/2016	397.04	450.18	299	278.5	20.5	Convergent	Yes	297	330.8	33.8	Convergent	Yes	**Yes**		**Convergent**	1	0
9/29/2016	398.27	312.15	299	276.6	22.4	Convergent	Yes	297	333.3	36.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/30/2016	399.76	142.25	299	267.0	32.0	Convergent	Yes	297	342.5	45.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/1/2016	399.10	497.90	299	258.5	40.5	Convergent	Yes	297	347.2	50.2	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
10/2/2016	398.80	497.92	299	257.1	41.9	Convergent	Yes	297	345.7	48.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/3/2016	398.86	500.00	299	256.9	42.1	Convergent	Yes	297	345.5	48.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/4/2016	399.05	500.00	299	254.7	44.3	Convergent	Yes	297	347.7	50.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/5/2016	399.20	486.11	299	252.6	46.4	Convergent	Yes	297	349.8	52.8	Convergent	Yes	**Yes**		**Convergent**	1	0
10/6/2016	399.43	340.25	299	252.5	46.5	Convergent	Yes	297	351.2	54.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/7/2016	399.55	255.42	299	251.6	47.4	Convergent	Yes	297	351.1	54.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/8/2016	399.91	168.07	299	253.3	45.7	Convergent	Yes	297	351.7	54.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/9/2016	400.46	0.00	299	253.3	45.7	Convergent	Yes	297	352.5	55.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/10/2016	400.95	0.00	299	249.1	49.9	Convergent	Yes	297	356.2	59.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/11/2016	400.70	3.32	299	250.4	48.6	Convergent	Yes	297	354.2	57.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/12/2016	399.88	455.94	299	255.5	43.5	Convergent	Yes	297	349.3	52.3	Convergent	Yes	**Yes**		**Convergent**	1	0
10/13/2016	399.35	500.00	299	254.1	44.9	Convergent	Yes	297	347.1	50.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/14/2016	398.60	394.71	299	257.1	41.9	Convergent	Yes	297	344.3	47.3	Convergent	Yes	**Yes**		**Convergent**	1	0
10/15/2016	397.66	375.98	299	269.5	29.5	Convergent	Yes	297	336.3	39.3	Convergent	Yes	**Yes**		**Convergent**	1	0
10/16/2016	396.88	462.10	299	278.8	20.2	Convergent	Yes	297	330.8	33.8	Convergent	Yes	**Yes**		**Convergent**	1	0
10/17/2016	395.70	587.36	299	282.8	16.2	Convergent	Yes	297	327.3	30.3	Convergent	Yes	**Yes**		**Convergent**	1	0
10/18/2016	394.32	733.18	299	286.6	12.4	Convergent	Yes	297	324.0	27.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/19/2016	393.90	756.04	299	288.9	10.1	Convergent	Yes	297	322.3	25.3	Convergent	Yes	**Yes**		**Convergent**	1	0
10/20/2016	395.25	548.16	299	286.2	12.8	Convergent	Yes	297	324.2	27.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/21/2016	394.83	567.27	299	283.2	15.8	Convergent	Yes	297	326.6	29.6	Convergent	Yes	**Yes**		**Convergent**	1	0
10/22/2016	393.91	681.85	299	285.6	13.4	Convergent	Yes	297	324.5	27.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/23/2016	393.17	765.44	299	288.9	10.1	Convergent	Yes	297	322.2	25.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/24/2016	392.57	811.66	299	290.9	8.1	Convergent	Yes	297	321.1	24.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/25/2016	391.49	925.73	299	292.8	6.2	Convergent	Yes	297	319.7	22.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/26/2016	390.94	989.13	299	293.9	5.1	Convergent	Yes	297	318.4	21.4	Convergent	Yes	**Yes**		**Convergent**	1	0
10/27/2016	390.90	970.37	299	294.1	4.9	Convergent	Yes	297	318.2	21.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/28/2016	390.94	936.93	299	293.0	6.0	Convergent	Yes	297	318.6	21.6	Convergent	Yes	**Yes**		**Convergent**	1	0
10/29/2016	391.16	889.51	299	291.8	7.2	Convergent	Yes	297	318.9	21.9	Convergent	Yes	**Yes**		**Convergent**	1	0
10/30/2016	391.19	862.58	299	290.6	8.4	Convergent	Yes	297	319.5	22.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/31/2016	391.30	830.43	299	289.4	9.6	Convergent	Yes	297	319.8	22.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/1/2016	391.44	790.98	299	288.9	10.1	Convergent	Yes	297	320.1	23.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/2/2016	391.70	747.72	299	288.4	10.6	Convergent	Yes	297	320.7	23.7	Convergent	Yes	**Yes**		**Convergent**	1	0
11/3/2016	393.05	551.60	299	285.1	13.9	Convergent	Yes	297	323.1	26.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/4/2016	393.50	477.13	299	281.5	17.5	Convergent	Yes	297	326.9	29.9	Convergent	Yes	**Yes**		**Convergent**	1	0
11/5/2016	393.68	461.17	299	281.7	17.3	Convergent	Yes	297	328.6	31.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/6/2016	393.36	510.44	299	282.5	16.5	Convergent	Yes	297	327.6	30.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/7/2016	392.98	566.85	299	284.3	14.7	Convergent	Yes	297	326.1	29.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/8/2016	392.65	611.79	299	285.3	13.7	Convergent	Yes	297	324.5	27.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/9/2016	392.09	664.48	299	286.4	12.6	Convergent	Yes	297	323.5	26.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/10/2016	391.38	713.52	299	287.4	11.6	Convergent	Yes	297	321.9	24.9	Convergent	Yes	**Yes**		**Convergent**	1	0
11/11/2016	390.60	790.34	299	289.5	9.5	Convergent	Yes	297	320.0	23.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/12/2016	389.79	887.02	299	292.5	6.5	Convergent	Yes	297	318.4	21.4	Convergent	Yes	**Yes**		**Convergent**	1	0
11/13/2016	389.50	896.37	299	293.4	5.6	Convergent	Yes	297	317.5	20.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/14/2016	389.00	957.58	299	294.1	4.9	Convergent	Yes	297	317.0	20.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/15/2016	388.81	972.04	299	294.8	4.2	Convergent	Yes	297	316.5	19.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/16/2016	388.27	972.50	299	295.0	4.0	Convergent	Yes	297	316.1	19.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/17/2016	387.89	1055.60	299	295.6	3.4	Convergent	Yes	297	315.9	18.9	Convergent	Yes	**Yes**		**Convergent**	1	0
11/18/2016	387.98	1036.33	299	295.6	3.4	Convergent	Yes	297	315.7	18.7	Convergent	Yes	**Yes**		**Convergent**	1	0
11/19/2016	387.50	1046.03	299	295.2	3.8	Convergent	Yes	297	315.6	18.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/20/2016	386.56	1142.95	299	296.2	2.8	Convergent	Yes	297	315.0	18.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/21/2016	386.69	1120.48	299	296.3	2.7	Convergent	Yes	297	314.8	17.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/22/2016	386.59	1102.03	299	295.9	3.1	Convergent	Yes	297	314.8	17.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/23/2016	386.26	1132.08	299	295.9	3.1	Convergent	Yes	297	314.8	17.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/24/2016	386.24	1116.94	299	296.0	3.0	Convergent	Yes	297	314.8	17.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/25/2016	385.77	1149.14	299	296.0	3.0	Convergent	Yes	297	314.6	17.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/26/2016	385.39	850.52	299	296.4	2.6	Convergent	Yes	297	313.7	16.7	Convergent	Yes	**Yes**		**Convergent**	1	0
11/27/2016	386.62	595.01	299	296.6	2.4	Convergent	Yes	297	312.6	15.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/28/2016	387.13	589.55	299	295.8	3.2	Convergent	Yes	297	312.6	15.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/29/2016	386.94	584.61	299	295.3	3.7	Convergent	Yes	297	313.0	16.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/30/2016	386.90	583.32	299	295.4	3.6	Convergent	Yes	297	312.5	15.5	Convergent	Yes	**Yes**		**Convergent**	1	0
12/1/2016	387.42	657.50	299	294.8	4.2	Convergent	Yes	297	313.4	16.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/2/2016	388.15	692.44	299	292.9	6.1	Convergent	Yes	297	312.9	15.9	Convergent	Yes	**Yes**		**Convergent**	1	0
12/3/2016	388.82	614.17	299	290.0	9.0	Convergent	Yes	297	310.5	13.5	Convergent	Yes	**Yes**		**Convergent**	1	0
12/4/2016	389.29	575.54	299	288.8	10.2	Convergent	Yes	297	309.6	12.6	Convergent	Yes	**Yes**		**Convergent**	1	0
12/5/2016	389.43	552.33	299	287.6	11.4	Convergent	Yes	297	311.1	14.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/6/2016	389.72	531.94	299	287.4	11.6	Convergent	Yes	297	311.8	14.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/7/2016	389.42	536.94	299	287.0	12.0	Convergent	Yes	297	312.1	15.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/8/2016	389.50	527.85	299	287.0	12.0	Convergent	Yes	297	312.4	15.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/9/2016	389.72	507.44	299	286.3	12.7	Convergent	Yes	297	313.0	16.0	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
12/10/2016	390.33	455.27	299	285.5	13.5	Convergent	Yes	297	313.9	16.9	Convergent	Yes	**Yes**		**Convergent**	1	0
12/11/2016	390.50	453.37	299	285.6	13.4	Convergent	Yes	297	314.4	17.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/12/2016	390.74	429.03	299	286.0	13.0	Convergent	Yes	297	315.1	18.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/13/2016	390.15	475.75	299	286.0	13.0	Convergent	Yes	297	315.0	18.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/14/2016	389.53	504.88	299	286.8	12.2	Convergent	Yes	297	313.3	16.3	Convergent	Yes	**Yes**		**Convergent**	1	0
12/15/2016	387.85	652.40	299	288.4	10.6	Convergent	Yes	297	310.8	13.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/16/2016	383.85	1002.89	299	293.4	5.6	Convergent	Yes	297	305.7	8.7	Convergent	Yes	**Yes**		**Convergent**	1	0
12/17/2016	382.81	1191.03	299	296.6	2.4	Convergent	Yes	297	302.3	5.3	Convergent	Yes	**Yes**		**Convergent**	1	0
12/18/2016	382.63	1163.28	299	296.9	2.1	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
12/19/2016	380.52	1370.88	299	297.4	1.6	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
12/20/2016	380.39	1419.36	299	297.6	1.4	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/21/2016	380.92	1352.24	299	297.0	2.0	Convergent	Yes	297	299.4	2.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/22/2016	381.90	1225.85	299	295.9	3.1	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/23/2016	382.43	1085.57	299	294.4	4.6	Convergent	Yes	297	299.2	2.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/24/2016	383.04	1035.31	299	293.8	5.2	Convergent	Yes	297	299.8	2.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/25/2016	383.78	940.38	299	293.0	6.0	Convergent	Yes	297	300.4	3.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/26/2016	385.17	817.64	299	291.7	7.3	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/27/2016	387.33	574.17	299	289.4	9.6	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/28/2016	387.24	490.02	299	288.5	10.5	Convergent	Yes	297	307.8	10.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/29/2016	388.10	447.70	299	289.3	9.7	Convergent	Yes	297	308.8	11.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/30/2016	389.03	341.78	299	287.6	11.4	Convergent	Yes	297	310.8	13.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/31/2016	389.04	320.73	299	287.3	11.7	Convergent	Yes	297	312.6	15.6	Convergent	Yes	**Yes**		**Convergent**	1	0
															2016 Totals	365	1
															2016 % Convergent	**100%**	

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2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
1/1/2017	389.76	279.77	299	287.2	11.8	Convergent	Yes	297	313.5	16.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/2/2017	390.80	208.62	299	284.0	15.0	Convergent	Yes	297	318.1	21.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/3/2017	391.08	189.81	299	282.5	16.5	Convergent	Yes	297	323.0	26.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/4/2017	390.59	259.42	299	282.5	16.5	Convergent	Yes	297	319.5	22.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/5/2017	389.76	379.61	299	282.9	16.1	Convergent	Yes	297	308.5	11.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/6/2017	388.17	515.88	299	285.3	13.7	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/7/2017	384.44	835.84	299	289.8	9.2	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/8/2017	383.42	981.38	299	292.6	6.4	Convergent	Yes	297	298.3	1.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/9/2017	383.81	931.99	299	292.5	6.5	Convergent	Yes	297	297.5	0.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/10/2017	384.53	866.21	299	291.6	7.4	Convergent	Yes	297	299.0	2.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/11/2017	386.98	625.93	299	289.4	9.6	Convergent	Yes	297	301.6	4.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/12/2017	387.75	472.39	299	287.2	11.8	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
1/13/2017	386.17	606.76	299	288.3	10.7	Convergent	Yes	297	305.1	8.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/14/2017	385.89	680.83	299	289.5	9.5	Convergent	Yes	297	303.9	6.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/15/2017	385.64	676.78	299	289.9	9.1	Convergent	Yes	297	303.4	6.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/16/2017	386.10	599.57	299	289.6	9.4	Convergent	Yes	297	303.1	6.1	Convergent	Yes	**Yes**		**Convergent**	1	0
1/17/2017	386.84	470.65	299	290.0	9.0	Convergent	Yes	297	303.6	6.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/18/2017	388.21	332.17	299	288.8	10.2	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/19/2017	389.05	260.96	299	287.7	11.3	Convergent	Yes	297	306.5	9.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/20/2017	389.69	234.69	299	287.0	12.0	Convergent	Yes	297	307.6	10.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/21/2017	390.98	173.13	299	284.0	15.0	Convergent	Yes	297	310.2	13.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/22/2017	392.75	79.31	299	278.6	20.4	Convergent	Yes	297	323.3	26.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/23/2017	394.83	2.61	299	265.2	33.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/24/2017	395.69	0.00	299	243.1	55.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/25/2017	395.04	0.00	299	235.2	63.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/26/2017	394.18	0.00	299	243.9	55.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/27/2017	393.91	0.00	299	254.3	44.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/28/2017	394.21	0.00	299	255.2	43.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/29/2017	394.73	0.00	299	253.4	45.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/30/2017	394.52	0.00	299	250.5	48.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
1/31/2017	393.90	212.30	299	256.7	42.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/1/2017	392.91	163.18	299	264.5	34.5	Convergent	Yes	297	347.6	50.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/2/2017	391.99	263.49	299	273.0	26.0	Convergent	Yes	297	326.0	29.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/3/2017	391.67	292.90	299	277.5	21.5	Convergent	Yes	297	319.2	22.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/4/2017	391.60	267.05	299	279.4	19.6	Convergent	Yes	297	316.8	19.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/5/2017	391.58	266.17	299	280.7	18.3	Convergent	Yes	297	316.0	19.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/6/2017	391.29	286.04	299	282.0	17.0	Convergent	Yes	297	314.5	17.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/7/2017	390.88	327.30	299	283.7	15.3	Convergent	Yes	297	312.1	15.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/8/2017	390.83	318.15	299	283.7	15.3	Convergent	Yes	297	311.4	14.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/9/2017	390.13	328.31	299	284.8	14.2	Convergent	Yes	297	310.5	13.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/10/2017	388.94	421.27	299	287.2	11.8	Convergent	Yes	297	308.0	11.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/11/2017	388.73	484.60	299	288.6	10.4	Convergent	Yes	297	306.6	9.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/12/2017	388.58	490.10	299	288.8	10.2	Convergent	Yes	297	306.3	9.3	Convergent	Yes	**Yes**		**Convergent**	1	0
2/13/2017	387.65	536.82	299	289.8	9.2	Convergent	Yes	297	305.6	8.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/14/2017	387.06	593.52	299	290.7	8.3	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/15/2017	387.54	546.30	299	291.4	7.6	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/16/2017	387.74	497.96	299	290.6	8.4	Convergent	Yes	297	304.1	7.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/17/2017	387.99	468.00	299	290.3	8.7	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/18/2017	388.27	428.24	299	289.9	9.1	Convergent	Yes	297	304.4	7.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/19/2017	389.07	334.32	299	289.2	9.8	Convergent	Yes	297	304.9	7.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/20/2017	389.58	226.49	299	288.4	10.6	Convergent	Yes	297	305.5	8.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/21/2017	389.51	196.55	299	289.5	9.5	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
2/22/2017	388.97	249.60	299	291.0	8.0	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/23/2017	388.84	283.98	299	291.5	7.5	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/24/2017	389.00	273.90	299	291.5	7.5	Convergent	Yes	297	304.1	7.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/25/2017	389.02	263.70	299	290.7	8.3	Convergent	Yes	297	304.3	7.3	Convergent	Yes	**Yes**		**Convergent**	1	0
2/26/2017	389.58	219.13	299	289.5	9.5	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/27/2017	390.75	127.22	299	288.3	10.7	Convergent	Yes	297	306.6	9.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/28/2017	391.46	92.75	299	285.7	13.3	Convergent	Yes	297	309.0	12.0	Convergent	Yes	**Yes**		**Convergent**	1	0
3/1/2017	392.39	71.72	299	283.7	15.3	Convergent	Yes	297	313.2	16.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/2/2017	392.66	57.12	299	280.5	18.5	Convergent	Yes	297	319.7	22.7	Convergent	Yes	**Yes**		**Convergent**	1	0
3/3/2017	393.03	48.06	299	277.1	21.9	Convergent	Yes	297	327.0	30.0	Convergent	Yes	**Yes**		**Convergent**	1	0
3/4/2017	393.54	34.43	299	273.5	25.5	Convergent	Yes	297	337.2	40.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/5/2017	394.06	9.36	299	268.4	30.6	Convergent	Yes	297	354.0	57.0	Convergent	Yes	**Yes**		**Convergent**	1	0
3/6/2017	394.51	0.00	299	262.2	36.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/7/2017	394.90	0.00	299	258.0	41.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/8/2017	395.04	0.00	299	253.4	45.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/9/2017	395.20	0.00	299	249.6	49.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
3/10/2017	395.46	0.00	299	249.6	49.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/11/2017	395.50	0.00	299	246.2	52.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/12/2017	395.33	0.00	299	248.4	50.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/13/2017	395.00	0.00	299	253.4	45.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/14/2017	394.70	244.98	299	257.6	41.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/15/2017	394.38	191.86	299	259.7	39.3	Convergent	Yes	297	357.7	60.7	Convergent	Yes	**Yes**		**Convergent**	1	0
3/16/2017	394.06	139.55	299	262.9	36.1	Convergent	Yes	297	343.1	46.1	Convergent	Yes	**Yes**		**Convergent**	1	0
3/17/2017	393.69	150.38	299	268.6	30.4	Convergent	Yes	297	331.3	34.3	Convergent	Yes	**Yes**		**Convergent**	1	0
3/18/2017	393.20	178.23	299	273.2	25.8	Convergent	Yes	297	323.4	26.4	Convergent	Yes	**Yes**		**Convergent**	1	0
3/19/2017	392.59	197.00	299	277.3	21.7	Convergent	Yes	297	317.5	20.5	Convergent	Yes	**Yes**		**Convergent**	1	0
3/20/2017	392.25	232.91	299	280.6	18.4	Convergent	Yes	297	314.2	17.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/21/2017	391.78	243.22	299	282.0	17.0	Convergent	Yes	297	312.1	15.1	Convergent	Yes	**Yes**		**Convergent**	1	0
3/22/2017	391.08	270.11	299	284.8	14.2	Convergent	Yes	297	309.9	12.9	Convergent	Yes	**Yes**		**Convergent**	1	0
3/23/2017	390.43	305.35	299	286.9	12.1	Convergent	Yes	297	308.2	11.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/24/2017	389.53	380.00	299	289.0	10.0	Convergent	Yes	297	306.7	9.7	Convergent	Yes	**Yes**		**Convergent**	1	0
3/25/2017	388.90	447.96	299	291.2	7.8	Convergent	Yes	297	305.6	8.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/26/2017	388.55	475.40	299	291.7	7.3	Convergent	Yes	297	304.7	7.7	Convergent	Yes	**Yes**		**Convergent**	1	0
3/27/2017	389.37	365.63	299	292.0	7.0	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
3/28/2017	389.97	257.97	299	290.7	8.3	Convergent	Yes	297	304.7	7.7	Convergent	Yes	**Yes**		**Convergent**	1	0
3/29/2017	390.37	212.62	299	290.6	8.4	Convergent	Yes	297	304.7	7.7	Convergent	Yes	**Yes**		**Convergent**	1	0
3/30/2017	391.87	130.60	299	288.8	10.2	Convergent	Yes	297	305.6	8.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/31/2017	395.20	19.56	299	278.6	20.4	Convergent	Yes	297	316.3	19.3	Convergent	Yes	**Yes**		**Convergent**	1	0
4/1/2017	397.57	0.00	299	243.9	55.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/2/2017	399.61	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/3/2017	400.89	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/4/2017	400.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/5/2017	400.81	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/6/2017	403.64	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/7/2017	405.67	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/8/2017	407.40	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/9/2017	407.93	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/10/2017	407.52	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/11/2017	406.78	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/12/2017	405.85	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/13/2017	404.68	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/14/2017	403.53	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/15/2017	402.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/16/2017	401.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/17/2017	400.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/18/2017	399.85	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/19/2017	399.70	0.00	299	235.6	63.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/20/2017	400.30	0.00	299	231.6	67.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/21/2017	400.71	0.00	299	217.0	82.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/22/2017	400.65	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/23/2017	400.38	0.00	299	220.5	78.5	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/24/2017	399.94	0.00	299	231.6	67.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/25/2017	399.80	0.00	299	244.8	54.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/26/2017	400.38	0.00	299	241.9	57.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/27/2017	401.39	0.00	299	224.0	75.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/28/2017	401.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/29/2017	403.14	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
4/30/2017	409.03	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/1/2017	413.83	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/2/2017	416.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/3/2017	418.08	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/4/2017	419.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/5/2017	420.51	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/6/2017	420.27	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/7/2017	419.12	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/8/2017	417.21	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/9/2017	414.95	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/10/2017	412.97	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/11/2017	411.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/12/2017	410.26	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/13/2017	409.46	0.03	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/14/2017	408.98	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/15/2017	408.78	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/16/2017	408.48	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/17/2017	408.14	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
5/18/2017	407.65	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/19/2017	407.16	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/20/2017	407.19	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/21/2017	409.04	0.01	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/22/2017	410.16	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/23/2017	410.41	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/24/2017	410.45	0.05	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/25/2017	410.54	0.03	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/26/2017	410.14	0.01	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/27/2017	409.42	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/28/2017	408.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/29/2017	408.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/30/2017	408.30	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
5/31/2017	408.15	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/1/2017	408.03	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/2/2017	407.93	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/3/2017	407.80	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/4/2017	407.60	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/5/2017	407.33	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/6/2017	406.79	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/7/2017	406.25	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
6/8/2017	405.70	0.00	299	234.3	64.7	Convergent	Yes	297	348.2	51.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/9/2017	404.88	99.69	299	250.1	48.9	Convergent	Yes	297	336.1	39.1	Convergent	Yes	**Yes**		**Convergent**	1	0
6/10/2017	403.89	155.24	299	252.4	46.6	Convergent	Yes	297	333.4	36.4	Convergent	Yes	**Yes**		**Convergent**	1	0
6/11/2017	402.93	150.01	299	263.2	35.8	Convergent	Yes	297	323.2	26.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/12/2017	401.90	268.15	299	281.9	17.1	Convergent	Yes	297	312.5	15.5	Convergent	Yes	**Yes**		**Convergent**	1	0
6/13/2017	400.76	292.21	299	288.5	10.5	Convergent	Yes	297	310.7	13.7	Convergent	Yes	**Yes**		**Convergent**	1	0
6/14/2017	399.75	292.92	299	291.7	7.3	Convergent	Yes	297	308.3	11.3	Convergent	Yes	**Yes**		**Convergent**	1	0
6/15/2017	399.27	317.72	299	292.3	6.7	Convergent	Yes	297	307.5	10.5	Convergent	Yes	**Yes**		**Convergent**	1	0
6/16/2017	399.12	280.22	299	293.5	5.5	Convergent	Yes	297	307.0	10.0	Convergent	Yes	**Yes**		**Convergent**	1	0
6/17/2017	397.84	356.68	299	295.6	3.4	Convergent	Yes	297	306.0	9.0	Convergent	Yes	**Yes**		**Convergent**	1	0
6/18/2017	397.49	421.13	299	295.5	3.5	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
6/19/2017	398.54	289.48	299	293.7	5.3	Convergent	Yes	297	306.2	9.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/20/2017	398.47	260.07	299	294.5	4.5	Convergent	Yes	297	307.5	10.5	Convergent	Yes	**Yes**		**Convergent**	1	0
6/21/2017	398.81	270.08	299	294.5	4.5	Convergent	Yes	297	307.5	10.5	Convergent	Yes	**Yes**		**Convergent**	1	0
6/22/2017	398.98	250.00	299	292.7	6.3	Convergent	Yes	297	308.3	11.3	Convergent	Yes	**Yes**		**Convergent**	1	0
6/23/2017	398.32	271.56	299	294.4	4.6	Convergent	Yes	297	308.1	11.1	Convergent	Yes	**Yes**		**Convergent**	1	0
6/24/2017	397.49	300.00	299	295.5	3.5	Convergent	Yes	297	307.4	10.4	Convergent	Yes	**Yes**		**Convergent**	1	0
6/25/2017	396.91	358.54	299	297.2	1.8	Convergent	Yes	297	306.7	9.7	Convergent	Yes	**Yes**		**Convergent**	1	0
6/26/2017	396.45	400.00	299	297.3	1.7	Convergent	Yes	297	306.4	9.4	Convergent	Yes	**Yes**		**Convergent**	1	0
6/27/2017	396.09	449.57	299	297.3	1.7	Convergent	Yes	297	306.2	9.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/28/2017	395.72	482.00	299	296.2	2.8	Convergent	Yes	297	306.2	9.2	Convergent	Yes	**Yes**		**Convergent**	1	0
6/29/2017	395.38	431.99	299	295.8	3.2	Convergent	Yes	297	305.7	8.7	Convergent	Yes	**Yes**		**Convergent**	1	0
6/30/2017	395.11	431.15	299	297.1	1.9	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/1/2017	395.76	357.89	299	296.4	2.6	Convergent	Yes	297	305.5	8.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/2/2017	400.21	72.11	299	291.3	7.7	Convergent	Yes	297	310.0	13.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/3/2017	402.36	0.00	299	271.9	27.1	Convergent	Yes	297	348.4	51.4	Convergent	Yes	**Yes**		**Convergent**	1	0
7/4/2017	402.46	0.00	299	257.1	41.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
7/5/2017	401.32	0.67	299	267.4	31.6	Convergent	Yes	297	354.8	57.8	Convergent	Yes	**Yes**		**Convergent**	1	0
7/6/2017	400.58	50.92	299	283.7	15.3	Convergent	Yes	297	326.2	29.2	Convergent	Yes	**Yes**		**Convergent**	1	0
7/7/2017	399.73	128.19	299	288.0	11.0	Convergent	Yes	297	318.3	21.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/8/2017	398.30	222.60	299	292.3	6.7	Convergent	Yes	297	314.0	17.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/9/2017	396.63	363.73	299	295.7	3.3	Convergent	Yes	297	309.8	12.8	Convergent	Yes	**Yes**		**Convergent**	1	0
7/10/2017	394.88	555.83	299	296.0	3.0	Convergent	Yes	297	307.7	10.7	Convergent	Yes	**Yes**		**Convergent**	1	0
7/11/2017	393.15	763.23	299	296.7	2.3	Convergent	Yes	297	306.1	9.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/12/2017	392.73	776.33	299	296.0	3.0	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/13/2017	392.83	649.92	299	295.6	3.4	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
7/14/2017	392.58	617.34	299	296.0	3.0	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
7/15/2017	392.61	647.55	299	296.4	2.6	Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/16/2017	393.41	489.88	299	295.7	3.3	Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/17/2017	394.33	356.59	299	295.2	3.8	Convergent	Yes	297	305.7	8.7	Convergent	Yes	**Yes**		**Convergent**	1	0
7/18/2017	393.95	360.75	299	295.5	3.5	Convergent	Yes	297	306.0	9.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/19/2017	392.75	512.87	299	296.5	2.5	Convergent	Yes	297	305.7	8.7	Convergent	Yes	**Yes**		**Convergent**	1	0
7/20/2017	391.57	675.88	299	297.4	1.6	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/21/2017	390.62	795.86	299	297.6	1.4	Convergent	Yes	297	303.5	6.5	Convergent	Yes	**Yes**		**Convergent**	1	0
7/22/2017	390.10	851.05	299	297.3	1.7	Convergent	Yes	297	302.8	5.8	Convergent	Yes	**Yes**		**Convergent**	1	0
7/23/2017	390.41	770.13	299	296.8	2.2	Convergent	Yes	297	302.6	5.6	Convergent	Yes	**Yes**		**Convergent**	1	0
7/24/2017	390.94	626.72	299	295.8	3.2	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
7/25/2017	392.56	365.19	299	295.2	3.8	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
7/26/2017	394.02	204.55	299	294.8	4.2	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
7/27/2017	395.01	122.01	299	293.9	5.1	Convergent	Yes	297	306.1	9.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/28/2017	395.85	81.84	299	292.3	6.7	Convergent	Yes	297	308.1	11.1	Convergent	Yes	**Yes**		**Convergent**	1	0
7/29/2017	396.35	64.77	299	290.3	8.7	Convergent	Yes	297	311.6	14.6	Convergent	Yes	**Yes**		**Convergent**	1	0
7/30/2017	397.55	31.86	299	287.8	11.2	Convergent	Yes	297	317.6	20.6	Convergent	Yes	**Yes**		**Convergent**	1	0
7/31/2017	398.95	0.24	299	278.1	20.9	Convergent	Yes	297	337.9	40.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/1/2017	397.27	32.46	299	279.3	19.7	Convergent	Yes	297	333.9	36.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/2/2017	394.81	210.71	299	291.5	7.5	Convergent	Yes	297	313.1	16.1	Convergent	Yes	**Yes**		**Convergent**	1	0
8/3/2017	392.73	457.68	299	297.3	1.7	Convergent	Yes	297	307.1	10.1	Convergent	Yes	**Yes**		**Convergent**	1	0
8/4/2017	392.57	502.05	299	297.0	2.0	Convergent	Yes	297	306.3	9.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/5/2017	391.90	541.17	299	296.5	2.5	Convergent	Yes	297	306.6	9.6	Convergent	Yes	**Yes**		**Convergent**	1	0
8/6/2017	390.75	632.38	299	297.3	1.7	Convergent	Yes	297	305.7	8.7	Convergent	Yes	**Yes**		**Convergent**	1	0
8/7/2017	388.32	873.04	299	298.2	0.8	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0
8/8/2017	387.76	959.53	299	299.2	-0.2	Divergent	No	297	302.1	5.1	Convergent	Yes	**No**	4.92	**Convergent**	1	0
8/9/2017	391.65	510.63	299	296.5	2.5	Convergent	Yes	297	302.4	5.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/10/2017	392.33	411.66	299	291.8	7.2	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/11/2017	390.50	646.12	299	292.1	6.9	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/12/2017	389.20	809.49	299	294.2	4.8	Convergent	Yes	297	304.0	7.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/13/2017	388.66	865.49	299	295.5	3.5	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/14/2017	388.15	878.75	299	295.6	3.4	Convergent	Yes	297	302.2	5.2	Convergent	Yes	**Yes**		**Convergent**	1	0
8/15/2017	388.10	912.29	299	294.9	4.1	Convergent	Yes	297	301.4	4.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/16/2017	387.54	943.58	299	295.0	4.0	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
8/17/2017	386.78	986.89	299	295.1	3.9	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/18/2017	385.26	1115.61	299	295.9	3.1	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/19/2017	384.89	1137.47	299	296.5	2.5	Convergent	Yes	297	299.3	2.3	Convergent	Yes	**Yes**		**Convergent**	1	0
8/20/2017	385.55	1065.02	299	296.0	3.0	Convergent	Yes	297	298.8	1.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/21/2017	386.47	938.47	299	294.7	4.3	Convergent	Yes	297	299.1	2.1	Convergent	Yes	**Yes**		**Convergent**	1	0
8/22/2017	386.19	941.10	299	293.6	5.4	Convergent	Yes	297	299.4	2.4	Convergent	Yes	**Yes**		**Convergent**	1	0
8/23/2017	386.60	893.90	299	293.1	5.9	Convergent	Yes	297	299.9	2.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/24/2017	388.95	697.87	299	290.8	8.2	Convergent	Yes	297	301.0	4.0	Convergent	Yes	**Yes**		**Convergent**	1	0
8/25/2017	394.84	152.88	299	282.2	16.8	Convergent	Yes	297	307.8	10.8	Convergent	Yes	**Yes**		**Convergent**	1	0
8/26/2017	395.20	44.52	299	267.1	31.9	Convergent	Yes	297	357.7	60.7	Convergent	Yes	**Yes**		**Convergent**	1	0
8/27/2017	393.15	255.07	299	271.3	27.7	Convergent	Yes	297	334.9	37.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/28/2017	391.95	352.72	299	280.3	18.7	Convergent	Yes	297	315.6	18.6	Convergent	Yes	**Yes**		**Convergent**	1	0
8/29/2017	390.88	349.72	299	286.6	12.4	Convergent	Yes	297	309.9	12.9	Convergent	Yes	**Yes**		**Convergent**	1	0
8/30/2017	390.53	364.22	299	290.4	8.6	Convergent	Yes	297	307.2	10.2	Convergent	Yes	**Yes**		**Convergent**	1	0
8/31/2017	390.38	368.52	299	292.0	7.0	Convergent	Yes	297	306.1	9.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/1/2017	389.95	392.61	299	292.1	6.9	Convergent	Yes	297	305.9	8.9	Convergent	Yes	**Yes**		**Convergent**	1	0
9/2/2017	389.37	422.90	299	293.1	5.9	Convergent	Yes	297	305.1	8.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/3/2017	388.97	458.15	299	293.4	5.6	Convergent	Yes	297	304.9	7.9	Convergent	Yes	**Yes**		**Convergent**	1	0
9/4/2017	388.05	570.22	299	294.2	4.8	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
9/5/2017	387.85	582.78	299	294.4	4.6	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/6/2017	387.56	637.95	299	294.6	4.4	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/7/2017	387.40	673.24	299	294.6	4.4	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0
9/8/2017	387.18	673.87	299	294.2	4.8	Convergent	Yes	297	303.4	6.4	Convergent	Yes	**Yes**		**Convergent**	1	0
9/9/2017	386.57	728.90	299	294.4	4.6	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
9/10/2017	386.04	821.90	299	294.6	4.4	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/11/2017	385.44	877.28	299	294.4	4.6	Convergent	Yes	297	301.7	4.7	Convergent	Yes	**Yes**		**Convergent**	1	0
9/12/2017	384.82	922.36	299	294.2	4.8	Convergent	Yes	297	301.1	4.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/13/2017	384.14	1019.49	299	294.9	4.1	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
9/14/2017	383.46	1140.39	299	295.5	3.5	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/15/2017	383.60	1117.51	299	294.9	4.1	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/16/2017	382.86	1200.23	299	294.9	4.1	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
9/17/2017	382.55	1219.94	299	294.7	4.3	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
9/18/2017	382.31	1195.75	299	294.5	4.5	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/19/2017	382.74	1082.80	299	294.1	4.9	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/20/2017	382.32	1039.98	299	294.4	4.6	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/21/2017	382.37	1034.57	299	294.7	4.3	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/22/2017	382.55	1014.67	299	294.7	4.3	Convergent	Yes	297	300.3	3.3	Convergent	Yes	**Yes**		**Convergent**	1	0
9/23/2017	383.38	922.85	299	293.7	5.3	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
9/24/2017	383.58	860.88	299	293.1	5.9	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
9/25/2017	383.14	872.67	299	293.4	5.6	Convergent	Yes	297	301.4	4.4	Convergent	Yes	**Yes**		**Convergent**	1	0
9/26/2017	383.22	846.20	299	293.8	5.2	Convergent	Yes	297	301.4	4.4	Convergent	Yes	**Yes**		**Convergent**	1	0
9/27/2017	382.19	904.30	299	294.3	4.7	Convergent	Yes	297	301.1	4.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/28/2017	382.36	893.03	299	294.8	4.2	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
9/29/2017	382.99	837.88	299	294.6	4.4	Convergent	Yes	297	301.1	4.1	Convergent	Yes	**Yes**		**Convergent**	1	0
9/30/2017	382.40	858.30	299	294.2	4.8	Convergent	Yes	297	301.4	4.4	Convergent	Yes	**Yes**		**Convergent**	1	0
10/1/2017	381.93	887.39	299	294.7	4.3	Convergent	Yes	297	301.1	4.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/2/2017	382.24	860.15	299	294.8	4.2	Convergent	Yes	297	301.1	4.1	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
10/3/2017	382.91	775.35	299	294.3	4.7	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
10/4/2017	383.34	655.90	299	294.3	4.7	Convergent	Yes	297	301.5	4.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/5/2017	383.71	559.15	299	294.4	4.6	Convergent	Yes	297	301.8	4.8	Convergent	Yes	**Yes**		**Convergent**	1	0
10/6/2017	384.52	434.64	299	294.6	4.4	Convergent	Yes	297	302.1	5.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/7/2017	384.86	420.67	299	294.9	4.1	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/8/2017	384.23	439.90	299	295.4	3.6	Convergent	Yes	297	302.5	5.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/9/2017	384.33	448.00	299	295.4	3.6	Convergent	Yes	297	302.1	5.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/10/2017	385.88	369.46	299	294.5	4.5	Convergent	Yes	297	302.9	5.9	Convergent	Yes	**Yes**		**Convergent**	1	0
10/11/2017	388.68	225.20	299	291.7	7.3	Convergent	Yes	297	305.1	8.1	Convergent	Yes	**Yes**		**Convergent**	1	0
10/12/2017	392.08	34.63	299	284.8	14.2	Convergent	Yes	297	316.0	19.0	Convergent	Yes	**Yes**		**Convergent**	1	0
10/13/2017	392.66	0.00	299	276.4	22.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/14/2017	392.01	0.00	299	274.2	24.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/15/2017	392.25	0.00	299	274.3	24.7	Convergent	Yes	297	357.7	60.7	Convergent	Yes	**Yes**		**Convergent**	1	0
10/16/2017	393.53	0.00	299	268.4	30.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/17/2017	394.66	0.00	299	253.4	45.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/18/2017	395.10	0.00	299	238.1	60.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/19/2017	394.94	0.00	299	232.4	66.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/20/2017	394.67	0.00	299	232.9	66.1	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/21/2017	394.25	0.00	299	239.7	59.3	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/22/2017	393.80	0.00	299	246.0	53.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/23/2017	393.55	0.00	299	253.4	45.6	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/24/2017	393.17	87.03	299	258.3	40.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/25/2017	393.18	87.20	299	262.0	37.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/26/2017	394.14	0.00	299	258.3	40.7	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/27/2017	393.63	59.66	299	256.0	43.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
10/28/2017	392.46	66.46	299	266.2	32.8	Convergent	Yes	297	348.5	51.5	Convergent	Yes	**Yes**		**Convergent**	1	0
10/29/2017	392.21	86.25	299	272.4	26.6	Convergent	Yes	297	330.4	33.4	Convergent	Yes	**Yes**		**Convergent**	1	0
10/30/2017	392.22	90.90	299	275.9	23.1	Convergent	Yes	297	325.6	28.6	Convergent	Yes	**Yes**		**Convergent**	1	0
10/31/2017	391.61	101.52	299	278.6	20.4	Convergent	Yes	297	321.9	24.9	Convergent	Yes	**Yes**		**Convergent**	1	0
11/1/2017	390.96	127.27	299	282.3	16.7	Convergent	Yes	297	317.2	20.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/2/2017	391.12	126.41	299	284.5	14.5	Convergent	Yes	297	314.3	17.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/3/2017	390.68	149.38	299	285.7	13.3	Convergent	Yes	297	313.5	16.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/4/2017	389.48	225.40	299	288.1	10.9	Convergent	Yes	297	311.1	14.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/5/2017	389.11	248.66	299	290.0	9.0	Convergent	Yes	297	308.7	11.7	Convergent	Yes	**Yes**		**Convergent**	1	0
11/6/2017	388.58	274.19	299	290.5	8.5	Convergent	Yes	297	307.8	10.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/7/2017	387.74	365.07	299	291.7	7.3	Convergent	Yes	297	307.1	10.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/8/2017	387.65	363.94	299	292.1	6.9	Convergent	Yes	297	306.4	9.4	Convergent	Yes	**Yes**		**Convergent**	1	0
11/9/2017	386.97	457.21	299	292.5	6.5	Convergent	Yes	297	306.2	9.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/10/2017	386.52	574.98	299	292.8	6.2	Convergent	Yes	297	306.0	9.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/11/2017	386.43	560.07	299	292.0	7.0	Convergent	Yes	297	306.1	9.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/12/2017	386.20	514.47	299	292.4	6.6	Convergent	Yes	297	305.6	8.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/13/2017	386.55	545.92	299	292.0	7.0	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
11/14/2017	386.51	524.23	299	291.1	7.9	Convergent	Yes	297	306.0	9.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/15/2017	385.70	548.52	299	291.6	7.4	Convergent	Yes	297	305.5	8.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/16/2017	385.88	564.87	299	291.9	7.1	Convergent	Yes	297	305.1	8.1	Convergent	Yes	**Yes**		**Convergent**	1	0
11/17/2017	386.08	541.70	299	291.1	7.9	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/18/2017	386.67	489.58	299	290.0	9.0	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
11/19/2017	386.48	465.06	299	290.2	8.8	Convergent	Yes	297	305.5	8.5	Convergent	Yes	**Yes**		**Convergent**	1	0
11/20/2017	386.10	477.64	299	290.2	8.8	Convergent	Yes	297	305.8	8.8	Convergent	Yes	**Yes**		**Convergent**	1	0
11/21/2017	385.26	537.45	299	291.1	7.9	Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/22/2017	385.53	518.10	299	291.4	7.6	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
11/23/2017	386.01	476.74	299	290.6	8.4	Convergent	Yes	297	305.2	8.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/24/2017	385.80	483.57	299	290.3	8.7	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
11/25/2017	385.99	481.73	299	290.9	8.1	Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/26/2017	385.78	476.73	299	290.3	8.7	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
11/27/2017	385.70	479.84	299	290.3	8.7	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
11/28/2017	385.46	492.62	299	290.5	8.5	Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
11/29/2017	385.40	491.41	299	291.0	8.0	Convergent	Yes	297	305.2	8.2	Convergent	Yes	**Yes**		**Convergent**	1	0
11/30/2017	385.21	495.74	299	290.5	8.5	Convergent	Yes	297	304.9	7.9	Convergent	Yes	**Yes**		**Convergent**	1	0
12/1/2017	384.94	508.23	299	291.1	7.9	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/2/2017	384.47	523.85	299	291.8	7.2	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
12/3/2017	384.23	524.53	299	292.5	6.5	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/4/2017	383.73	559.93	299	292.8	6.2	Convergent	Yes	297	304.0	7.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/5/2017	383.82	559.10	299	293.4	5.6	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0
12/6/2017	383.11	656.99	299	293.5	5.5	Convergent	Yes	297	303.6	6.6	Convergent	Yes	**Yes**		**Convergent**	1	0
12/7/2017	383.00	728.34	299	293.9	5.1	Convergent	Yes	297	304.0	7.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/8/2017	382.59	761.56	299	294.1	4.9	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
12/9/2017	383.32	779.28	299	293.6	5.4	Convergent	Yes	297	304.8	7.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/10/2017	383.16	727.77	299	293.0	6.0	Convergent	Yes	297	305.2	8.2	Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
12/11/2017	383.43	707.38	299	292.0	7.0	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/12/2017	382.88	696.58	299	292.4	6.6	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
12/13/2017	382.33	735.61	299	293.1	5.9	Convergent	Yes	297	304.9	7.9	Convergent	Yes	**Yes**		**Convergent**	1	0
12/14/2017	382.25	774.49	299	293.6	5.4	Convergent	Yes	297	305.0	8.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/15/2017	381.18	807.86	299	294.2	4.8	Convergent	Yes	297	304.3	7.3	Convergent	Yes	**Yes**		**Convergent**	1	0
12/16/2017	381.20	828.51	299	293.9	5.1	Convergent	Yes	297	303.2	6.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/17/2017	380.64	871.66	299	294.0	5.0	Convergent	Yes	297	302.1	5.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/18/2017	380.15	993.10	299	293.9	5.1	Convergent	Yes	297	301.6	4.6	Convergent	Yes	**Yes**		**Convergent**	1	0
12/19/2017	380.24	1006.89	299	293.3	5.7	Convergent	Yes	297	301.1	4.1	Convergent	Yes	**Yes**		**Convergent**	1	0
12/20/2017	381.18	871.03	299	292.7	6.3	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
12/21/2017	381.38	813.99	299	292.2	6.8	Convergent	Yes	297	301.5	4.5	Convergent	Yes	**Yes**		**Convergent**	1	0
12/22/2017	382.45	742.56	299	291.3	7.7	Convergent	Yes	297	302.4	5.4	Convergent	Yes	**Yes**		**Convergent**	1	0
12/23/2017	382.12	739.38	299	290.6	8.4	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/24/2017	382.22	722.85	299	290.5	8.5	Convergent	Yes	297	303.6	6.6	Convergent	Yes	**Yes**		**Convergent**	1	0
12/25/2017	381.86	725.30	299	290.8	8.2	Convergent	Yes	297	303.9	6.9	Convergent	Yes	**Yes**		**Convergent**	1	0
12/26/2017	381.60	761.90	299	290.9	8.1	Convergent	Yes	297	303.5	6.5	Convergent	Yes	**Yes**		**Convergent**	1	0
12/27/2017	380.14	828.08	299	291.3	7.7	Convergent	Yes	297	302.8	5.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/28/2017	378.35	980.60	299	292.9	6.1	Convergent	Yes	297	301.8	4.8	Convergent	Yes	**Yes**		**Convergent**	1	0
12/29/2017	378.27	1019.95	299	294.0	5.0	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
12/30/2017	378.50	1049.60	299	293.8	5.2	Convergent	Yes	297	300.0	3.0	Convergent	Yes	**Yes**		**Convergent**	1	0
12/31/2017	378.28	1117.88	299	293.8	5.2	Convergent	Yes	297	299.8	2.8	Convergent	Yes	**Yes**		**Convergent**	1	0
															2017 Totals	365	0
															2017 % Convergent	**100%**	

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
1/1/2018	378.46	1138.22	299	293.5	5.5	Convergent	Yes	297	300.2	3.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/2/2018	378.04	1122.63	299	292.9	6.1	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/3/2018	377.98	1125.35	299	293.3	5.7	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/4/2018	378.11	1076.81	299	293.3	5.7	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/5/2018	378.15	1028.40	299	292.9	6.1	Convergent	Yes	297	300.5	3.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/6/2018	378.36	1004.75	299	292.8	6.2	Convergent	Yes	297	300.7	3.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/7/2018	378.56	951.08	299	292.6	6.4	Convergent	Yes	297	300.9	3.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/8/2018	379.67	770.76	299	292.0	7.0	Convergent	Yes	297	301.2	4.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/9/2018	379.90	661.98	299	292.0	7.0	Convergent	Yes	297	301.4	4.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/10/2018	380.09	624.20	299	292.1	6.9	Convergent	Yes	297	301.7	4.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/11/2018	380.15	616.30	299	292.8	6.2	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/12/2018	380.48	620.94	299	292.7	6.3	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/13/2018	380.08	635.17	299	291.8	7.2	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/14/2018	379.78	649.23	299	291.8	7.2	Convergent	Yes	297	302.3	5.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/15/2018	379.84	663.56	299	292.7	6.3	Convergent	Yes	297	302.2	5.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/16/2018	380.02	643.88	299	292.3	6.7	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/17/2018	379.88	642.02	299	292.2	6.8	Convergent	Yes	297	302.0	5.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/18/2018	380.35	620.36	299	292.1	6.9	Convergent	Yes	297	302.6	5.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/19/2018	380.95	579.64	299	291.7	7.3	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/20/2018	381.33	554.42	299	290.5	8.5	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0
1/21/2018	380.63	567.24	299	290.5	8.5	Convergent	Yes	297	304.3	7.3	Convergent	Yes	**Yes**		**Convergent**	1	0
1/22/2018	380.65	557.78	299	291.6	7.4	Convergent	Yes	297	303.6	6.6	Convergent	Yes	**Yes**		**Convergent**	1	0
1/23/2018	381.84	426.54	299	291.8	7.2	Convergent	Yes	297	303.4	6.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/24/2018	382.27	298.33	299	291.3	7.7	Convergent	Yes	297	304.0	7.0	Convergent	Yes	**Yes**		**Convergent**	1	0
1/25/2018	382.35	295.44	299	291.9	7.1	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/26/2018	382.30	296.05	299	292.4	6.6	Convergent	Yes	297	304.2	7.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/27/2018	383.92	226.09	299	291.9	7.1	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
1/28/2018	384.68	183.11	299	290.2	8.8	Convergent	Yes	297	306.2	9.2	Convergent	Yes	**Yes**		**Convergent**	1	0
1/29/2018	385.35	173.24	299	288.0	11.0	Convergent	Yes	297	308.4	11.4	Convergent	Yes	**Yes**		**Convergent**	1	0
1/30/2018	384.71	169.27	299	287.5	11.5	Convergent	Yes	297	309.9	12.9	Convergent	Yes	**Yes**		**Convergent**	1	0
1/31/2018	384.31	200.65	299	288.6	10.4	Convergent	Yes	297	309.2	12.2	Convergent	Yes	**Yes**		**Convergent**	1	0
2/1/2018	383.78	258.76	299	288.6	10.4	Convergent	Yes	297	307.8	10.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/2/2018	383.07	277.04	299	289.2	9.8	Convergent	Yes	297	307.1	10.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/3/2018	382.93	300.37	299	290.1	8.9	Convergent	Yes	297	306.7	9.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/4/2018	381.60	454.65	299	291.4	7.6	Convergent	Yes	297	305.7	8.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/5/2018	381.10	505.37	299	291.6	7.4	Convergent	Yes	297	305.4	8.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/6/2018	380.56	543.33	299	291.9	7.1	Convergent	Yes	297	304.9	7.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/7/2018	379.94	660.80	299	291.8	7.2	Convergent	Yes	297	304.7	7.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/8/2018	379.33	755.18	299	292.2	6.8	Convergent	Yes	297	304.4	7.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/9/2018	379.36	769.66	299	292.4	6.6	Convergent	Yes	297	303.8	6.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/10/2018	380.23	714.32	299	291.5	7.5	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/11/2018	379.94	717.59	299	291.3	7.7	Convergent	Yes	297	303.8	6.8	Convergent	Yes	**Yes**		**Convergent**	1	0
2/12/2018	378.91	808.39	299	291.6	7.4	Convergent	Yes	297	303.4	6.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/13/2018	378.90	818.88	299	291.8	7.2	Convergent	Yes	297	303.0	6.0	Convergent	Yes	**Yes**		**Convergent**	1	0
2/14/2018	379.61	759.98	299	292.1	6.9	Convergent	Yes	297	302.9	5.9	Convergent	Yes	**Yes**		**Convergent**	1	0
2/15/2018	380.59	667.89	299	291.3	7.7	Convergent	Yes	297	303.7	6.7	Convergent	Yes	**Yes**		**Convergent**	1	0
2/16/2018	381.01	561.80	299	290.0	9.0	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/17/2018	380.75	498.50	299	290.3	8.7	Convergent	Yes	297	305.1	8.1	Convergent	Yes	**Yes**		**Convergent**	1	0
2/18/2018	380.49	512.55	299	291.5	7.5	Convergent	Yes	297	305.3	8.3	Convergent	Yes	**Yes**		**Convergent**	1	0
2/19/2018	380.40	484.93	299	291.7	7.3	Convergent	Yes	297	304.6	7.6	Convergent	Yes	**Yes**		**Convergent**	1	0
2/20/2018	381.69	340.26	299	292.0	7.0	Convergent	Yes	297	304.5	7.5	Convergent	Yes	**Yes**		**Convergent**	1	0
2/21/2018	387.53	165.05	299	287.1	11.9	Convergent	Yes	297	307.4	10.4	Convergent	Yes	**Yes**		**Convergent**	1	0
2/22/2018	392.86	0.70	299	264.8	34.2	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/23/2018	395.35	0.00	299	219.1	79.9	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/24/2018	397.24	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/25/2018	398.64	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/26/2018	399.15	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/27/2018	399.08	3.21	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
2/28/2018	398.92	10.35	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/1/2018	399.10	6.90	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/2/2018	398.75	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/3/2018	397.54	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/4/2018	396.58	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/5/2018	396.18	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/6/2018	396.46	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/7/2018	397.04	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/8/2018	396.96	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/9/2018	396.37	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0

GMCS Performance Monitoring Data Table
2013 through March 2018

Date	Daily Average River Elevation	Daily Average Flow Rate	North End of Barrier Wall (PZ-5U, PZ-5D, PZ-6U)					South End of Barrier Wall (PZ-8U, PZ-8D, PZ-7U)					Both Sides Convergent	If Divergent at South End $\Delta_{North} - \lvert\Delta_{South}\rvert$	OVERALL SYSTEM STATUS	Number of "Convergent"	Number of "Divergent"
			Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent	Azimuth of Ideal Flow Vector	Azimuth of Actual Flow Vector	Delta (degrees)	Comparison	Convergent					
3/10/2018	395.38	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/11/2018	395.14	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/12/2018	394.70	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/13/2018	393.22	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/14/2018	391.87	159.75	299	237.6	61.4	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/15/2018	390.86	131.50	299	252.7	46.3	Convergent	Yes	297	355.9	58.9	Convergent	Yes	**Yes**		**Convergent**	1	0
3/16/2018	390.13	108.06	299	263.6	35.4	Convergent	Yes	297	335.9	38.9	Convergent	Yes	**Yes**		**Convergent**	1	0
3/17/2018	389.48	137.52	299	270.5	28.5	Convergent	Yes	297	327.0	30.0	Convergent	Yes	**Yes**		**Convergent**	1	0
3/18/2018	388.76	167.02	299	274.1	24.9	Convergent	Yes	297	321.4	24.4	Convergent	Yes	**Yes**		**Convergent**	1	0
3/19/2018	388.31	202.01	299	278.4	20.6	Convergent	Yes	297	317.6	20.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/20/2018	389.70	148.00	299	277.9	21.1	Convergent	Yes	297	318.1	21.1	Convergent	Yes	**Yes**		**Convergent**	1	0
3/21/2018	391.17	80.78	299	270.5	28.5	Convergent	Yes	297	327.9	30.9	Convergent	Yes	**Yes**		**Convergent**	1	0
3/22/2018	391.18	68.84	299	265.0	34.0	Convergent	Yes	297	340.6	43.6	Convergent	Yes	**Yes**		**Convergent**	1	0
3/23/2018	390.88	84.39	299	266.9	32.1	Convergent	Yes	297	340.0	43.0	Convergent	Yes	**Yes**		**Convergent**	1	0
3/24/2018	391.05	86.67	299	267.8	31.2	Convergent	Yes	297	336.8	39.8	Convergent	Yes	**Yes**		**Convergent**	1	0
3/25/2018	392.37	16.31	299	263.9	35.1	Convergent	Yes	297	347.8	50.8	Convergent	Yes	**Yes**		**Convergent**	1	0
3/26/2018	392.51	0.00	299	258.0	41.0	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/27/2018	395.17	0.00	299	239.2	59.8	Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/28/2018	398.57	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/29/2018	399.29	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/30/2018	398.84	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
3/31/2018	398.71	0.00	299	Reverse Gradient		Convergent	Yes	297	Reverse Gradient		Convergent	Yes	**Yes**		**Convergent**	1	0
															2018 Totals	90	0
															2018 % Convergent	**100%**	

ATTACHMENT 3 – Groundwater Monitoring Well Data

Sauget Area 2, Site R
Quarterly Groundwater
Monitoring Well Data
Benzene (ug/L)

Benzene (ug/L)	MCL ug/L	WQS ug/L	BWMW-1S	BWMW-1M	BWMW-1D	BWMW-2S	BWMW-2M	BWMW-2D	BWMW-3S	BWMW-3M	BWMW-3D	BWMW-4S	BWMW-4M	BWMW-4D
Mar-13	5	4200	*4,970*	*183*	*290*	*1.7*	*432*	*785*	*24.3*	*340*	*181*	0.098	*3.9*	*325*
Jun-13			*586*	*240*	*14.1*	*11.7*	*416*	*857*	*29.3*	*399*	*297*	*0.37*	*116*	*75.5*
Sep-13			*8,300*	*24.5*	3.0	*21.9*	*247*	*684*	*19.9*	*354*	*334*	NS	*17.0*	*6.8*
Dec-13			*4,870*	*265*	*12.7*	*3.9*	*156*	*749*	*4.4*	*357*	*255*	NS	*1.5*	*13.3*
Mar-14			*8,100*	*465*	*47.1*	*0.61*	*164*	*747*	*16.6*	*372*	*205*	NS	*0.78*	*38.9*
Jun-14			*2,560*	*761*	50	*4.9*	*354*	*866*	*26.8*	*415*	*309*	*0.67*	*14.5*	10
Sep-14			*6,730*	*391*	*92.7*	1.0	*248*	*778*	*19.5*	*350*	*283*	*0.94*	*29.2*	2.5
Dec-14			*7,120*	*352*	50	*1.6*	*125*	*819*	*32.9*	*368*	*318*	0.5	*0.69*	2.5
Mar-15			*3,160*	*319*	50.0	*1.3*	*112*	*882*	*69.1*	*413*	*337*	NS	*0.85*	5.0
Jun-15			*1,380*	*664*	6.0	*0.23*	*198*	*352*	*40.4*	*461*	*386*	*5*	*4.8*	*2.2*
Sep-15			*388*	*408*	*10.6*	*0.30*	*165*	*853*	*39.0*	*473*	*544*	*0.27*	*2.8*	0.60
Dec-15			*246*	*65.2*	*10.4*	*0.80*	*127*	*855*	*17.6*	*506*	*627*	0.060	*0.65*	0.60
Mar-16			30.0	*64.4*	6.0	*0.58*	*116*	*774*	*12.7*	*573*	*686*	*0.20*	*0.95*	*0.17*
Jun-16			30.0	*106*	6.0	*1.8*	*177*	*774*	*5.5*	*705*	*881*	*0.50*	0.3	0.30
Sep-16			*164*	*133*	*16.1*	*0.62*	*136*	*762*	*2.8*	*733*	*865*	*0.56*	0.30	0.30
Dec-16			*167*	*93.9*	6.0	*0.89*	*122*	*765*	*4.7*	*863*	*561*	0.060	*2.5*	*0.55*
Mar-17			*974*	*0.88*	6.0	*0.33*	*133*	*795*	*10.7*	*1,090*	*746*	*0.17*	*0.54*	0.30
Jun-17			*23.7*	*214*	6.0	*0.42*	*282*	*767*	*12.5*	*965*	*1,020*	*2.6*	*0.24*	*0.83*
Sep-17			*50.7*	*10.6*	6.0	*0.94*	*127*	*712*	*10.8*	*1,080*	*808*	NS	*2.4*	0.30
Dec-17			*236*	*2.9*	6.0	*0.82*	*351*	*723*	*8.4*	*1,170*	*754*	NS	*1.3*	*0.67*

Sauget Area 2, Site R
Quarterly Groundwater
Monitoring Well Data
4-Chloroaniline (ug/L)

4-Chloroaniline (ug/L)	MCL ug/L	WQS ug/L	BWMW-1S	BWMW-1M	BWMW-1D	BWMW-2S	BWMW-2M	BWMW-2D	BWMW-3S	BWMW-3M	BWMW-3D	BWMW-4S	BWMW-4M	BWMW-4D
Mar-13	NS	2.4	*54.3*	*116*	*4.2*	*62.7*	*1,600*	*47,300*	20.0	*9,880*	*2,280*	*1.8*	*170*	*6,370*
Jun-13			*99.2*	*226*	*3.1*	*31.2*	*19,400*	*47,600*	*1,050*	*12,100*	*11,300*	1.8	*3,640*	*525*
Sep-13			*25.5*	*75.1*	*11.0*	*82.7*	*6,110*	*30,100*	*26.1*	*6,910*	*8,150*	NS	*83.7*	*149*
Dec-13			*103*	*184*	*3.6*	*45.8*	*6180*	*37,600*	20.0	*8,480*	*3,730*	NS	*39.0*	*361*
Mar-14			*50.8*	*176*	*3.3*	*25.0*	*3,750*	*27,000*	*10.9*	*5,880*	*10,800*	NS	*30.0*	*1,990*
Jun-14			*76.6*	*176*	*1.6*	*2.3*	*6,350*	*30,900*	*8.3*	*7,760*	*7,800*	*1.1*	*98.3*	*3.4*
Sep-14			*44.5*	*278*	*2.4*	*10.9*	8,420	*38,600*	*8.0*	*11,400*	*7,720*	0.56	*123*	*3.1*
Dec-14			*29.1*	*212*	*4.8*	*17.5*	*2,250*	*32,400*	*6.1*	*8,240*	*8,950*	0.59	*13.4*	*2.5*
Mar-15			*21.8*	*208*	0.78	*50.8*	*2,540*	*34,100*	*43.0*	*8,060*	*17,500*	NS	*12.0*	*3.4*
Jun-15			*23.4*	0.75	0.75	*1.7*	*293*	*29,000*	*156*	*5,570*	*6,250*	0.70	*5.3*	*4.6*
Sep-15			*18.9*	*258*	0.71	*9.8*	*2,790*	*26,400*	*31.0*	*7,340*	*4,620*	0.71	*35.3*	*1.3*
Dec-15			*16.9*	*373*	*22.8*	*3.1*	*2,300*	*23,600*	*5.2*	*5,420*	*5,020*	0.70	*7.8*	*1.4*
Mar-16			*9.5*	*209*	*1.1*	*20.8*	*1,740*	*22,500*	*2.7*	*8,090*	*3,910*	0.70	*12.3*	*0.95*
Jun-16			0.70	*250*	*1.4*	*15.9*	*3,660*	*17,500*	*4.7*	*5,200*	*973*	*5.3*	*0.99*	*1.3*
Sep-16			*17.2*	*191*	*11.7*	*21.3*	*1,980*	*20,800*	*6.6*	*4,250*	*1,100*	0.70	*1.9*	*1.3*
Dec-16			*16.9*	*281*	20.0	*19.6*	*1,050*	*13,100*	*11.6*	*3,300*	*7,560*	0.70	*63.6*	*0.92*
Mar-17			*23.8*	*313*	*1.5*	*15.1*	*1,570*	*11,800*	*2.3*	*2,550*	*5,590*	0.71	*31.4*	*0.90*
Jun-17			*12.4*	*393*	*1.3*	*5.2*	*4,220*	*18,800*	*2.9*	*3,340*	*815*	0.70	*12.3*	*1.1*
Sep-17			*19.3*	*393*	*4.1*	*3.2*	*1,160*	*8,300*	*10.7*	*2,870*	*3,590*	NS	*25.4*	*0.95*
Dec-17			*47.6*	*367*	*2.6*	*3.0*	*921*	*34,200*	*4.1*	*2,020*	*5,520*	NS	*3.4*	*1.1*

Sauget Area 2, Site R
Quarterly Groundwater
Monitoring Well Data
Chlorobenzene (ug/L)

Chlorobenzene (ug/L)	MCL ug/L	WQS ug/L	BWMW-1S	BWMW-1M	BWMW-1D	BWMW-2S	BWMW-2M	BWMW-2D	BWMW-3S	BWMW-3M	BWMW-3D	BWMW-4S	BWMW-4M	BWMW-4D
Mar-13	100	990	*95,400*	*1,830*	*5,030*	*181*	*2,570*	*4,070*	*188*	*3,950*	*3,110*	*24.6*	*164*	*1,980*
Jun-13			*94,700*	*4,810*	*6,100*	*176*	*2,560*	*4,180*	*232*	*5,310*	*3,010*	*32.4*	*1,300*	*1,050*
Sep-13			*81,600*	*4,080*	*4,420*	*188*	*1,940*	*3,490*	*169*	*4,680*	*2,650*	NS	*331*	*645*
Dec-13			*110,000*	*2,320*	*4,770*	*166*	*1,560*	*4,150*	*153*	*4,760*	*3,120*	NS	*163*	*1,010*
Mar-14			*166,000*	*1,960*	*8,190*	*153*	*2,230*	*3,920*	*168*	*4,630*	*3,100*	NS	*133*	*1,600*
Jun-14			*148,000*	*3,430*	*6,640*	*183*	*2,270*	*4,200*	*202*	*5,330*	*2,840*	*35.1*	*517*	*481*
Sep-14			*85,200*	*3,680*	*7,740*	*154*	*2,060*	*4,030*	*187*	*4,870*	*2,870*	*15.5*	*548*	*476*
Dec-14			*70,500*	*2,720*	50.0	*163*	*2,030*	*4,200*	*284*	*4,650*	*2,820*	0.50	*241*	*405*
Mar-15			*47,400*	*2,070*	*6,800*	*148*	*2,230*	*4,270*	*364*	*5,030*	*3,460*	NS	*158*	*461*
Jun-15			*48,600*	*2,760*	*8,420*	*133*	*1,970*	*1,700*	*242*	*4,880*	*2,700*	*130*	*312*	*369*
Sep-15			*48,300*	*2,050*	*7,530*	*154*	*1,970*	*4,710*	*316*	*4,740*	*2,670*	*13.2*	*278*	*330*
Dec-15			*31,900*	*1,990*	*8,290*	*124*	*2,210*	*4,820*	*194*	*4,470*	*2,560*	*8.8*	*172*	*271*
Mar-16			*31,600*	*1,300*	*7,350*	*174*	*1,830*	*3,920*	*151*	*4,700*	*2,440*	*13.5*	*181*	*291*
Jun-16			*32,800*	*1,270*	*8,940*	*163*	*2,030*	*3,950*	*131*	4,600	*1,920*	*21.7*	*201*	*316*
Sep-16			*45,600*	*546*	*9,000*	*174*	*2,110*	*3,870*	*118*	*4,460*	*2,210*	*15.2*	*168*	*263*
Dec-16			*29,800*	*311*	*7,230*	*173*	*2,260*	*4,290*	*134*	*4,220*	*2,820*	*1.8*	*181*	*364*
Mar-17			*9,140*	*551*	*8,690*	*154*	*1,920*	*4,600*	*178*	*3,840*	*2,890*	*6.3*	*121*	*472*
Jun-17			*29,900*	*1,310*	*8,350*	*124*	*2,120*	*3,690*	*163*	*4,340*	*2,020*	*26.4*	*249*	*388*
Sep-17			*21,000*	*190*	*6,260*	*178*	*2,370*	*4,320*	*188*	*4,480*	*2,350*	NS	*154*	*355*
Dec-17			*36,000*	*185*	*6,270*	*155*	*2,270*	*3,960*	*186*	*3,800*	*2,570*	NS	*82*	*464*

Sauget Area 2, Site R
Quarterly Groundwater
Monitoring Well Data
1,4-Dichlorobenzene (ug/L)

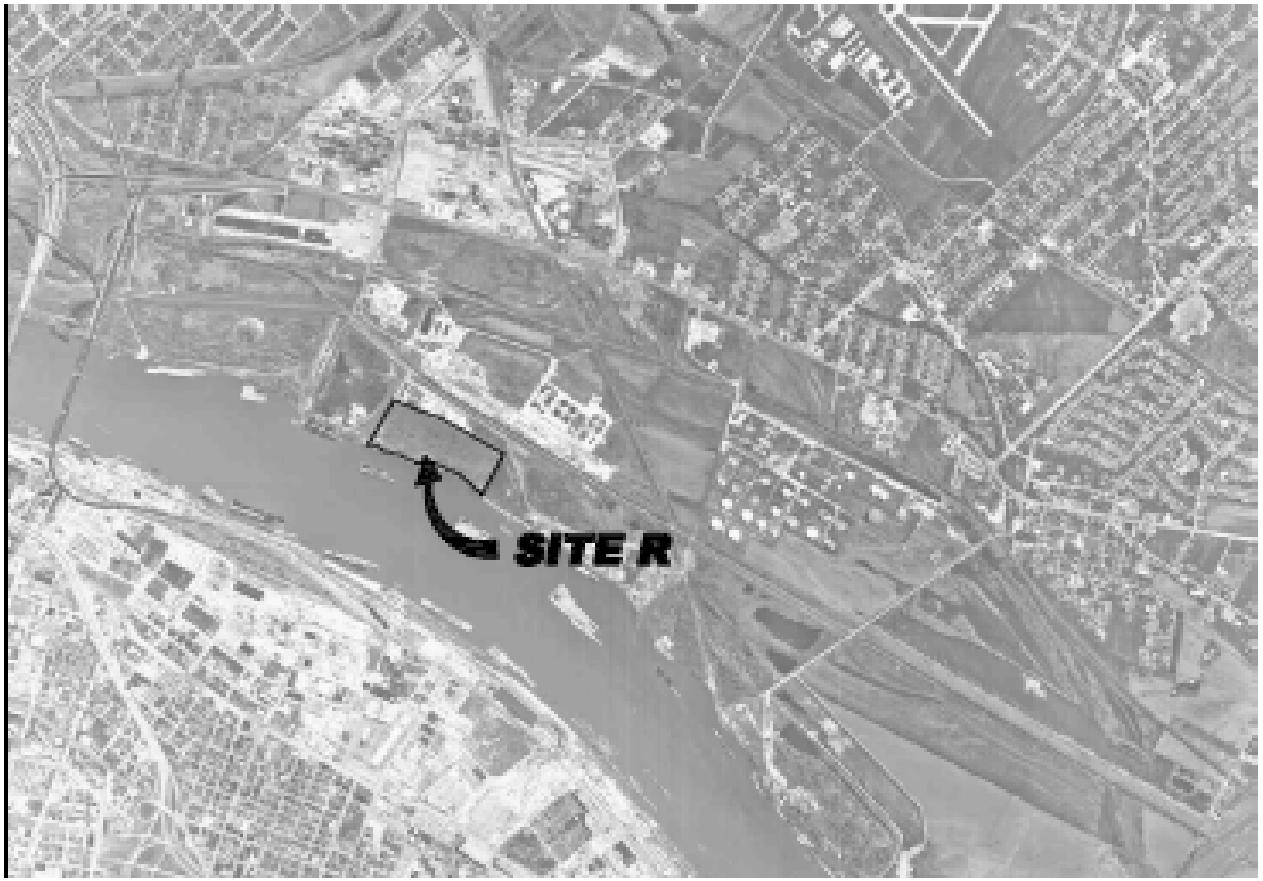
1,4-Dichlorobenzene (ug/L)	MCL ug/L	WQS ug/L	BWMW-1S	BWMW-1M	BWMW-1D	BWMW-2S	BWMW-2M	BWMW-2D	BWMW-3S	BWMW-3M	BWMW-3D	BWMW-4S	BWMW-4M
Mar-13	75	1800	*5.6*	*5.0*	*7.6*	*1.3*	*45.7*	*234*	*5.3*	*12.4*	*79.6*	1.1	*12.8*
Jun-13			*7.1*	*15.0*	*6.6*	1.1	545	1,100	23.5	227	581	*2.8*	112
Sep-13			*2.6*	*7.8*	*4.7*	*1.2*	*24.9*	345	*4.1*	*8.2*	*48.5*	NS	*12.4*
Dec-13			*6.3*	*8.5*	*8.4*	*1.9*	*48.1*	*263*	*5.4*	*13.4*	*89.6*	NS	*14.6*
Mar-14			*6.8*	*5.1*	*7.0*	*1.5*	*37.9*	*259*	*4.7*	*9.9*	*85.9*	NS	*10.7*
Jun-14			*7.8*	*7.9*	*6.5*	0.69	*36.0*	*217*	*4.3*	*8.5*	*63.6*	*2.2*	*22.7*
Sep-14			*6.0*	*9.3*	*8.1*	*1.3*	*41.8*	*230*	*3.7*	*9.7*	*50.0*	*1.5*	*27.0*
Dec-14			*4.5*	*8.8*	*7.2*	*1.6*	*32.0*	*225*	*9.6*	*12.4*	*68.7*	0.73	*15.0*
Mar-15			*3.8*	*3.9*	*8.2*	*1.5*	*39.6*	*274*	*9.8*	*11.4*	*85.2*	NS	*8.2*
Jun-15			*3.6*	*9.3*	*6.7*	*1.1*	*41.9*	*247*	*5.7*	*5.6*	*44.6*	0.62	*18.5*
Sep-15			*4.5*	*8.3*	*7.1*	*1.7*	*36.2*	*243*	*7.7*	*11.2*	*24.1*	*1.8*	*15.4*
Dec-15			*2.8*	*9.4*	*8.1*	*1.0*	*39.7*	*249*	*2.8*	*8.8*	*19.4*	0.62	*12.2*
Mar-16			*3.0*	*6.4*	*7.0*	*1.6*	*18.3*	*213*	*3.1*	*9.0*	*9.9*	*1.9*	*13.3*
Jun-16			*2.7*	*4.7*	*6.6*	*1.1*	*17.0*	*208*	*1.9*	*5.9*	*3.6*	*1.7*	*9.2*
Sep-16			*4.6*	*2.1*	*6.8*	*1.4*	*18.4*	*219*	*2.3*	*6.5*	*2.9*	*1.8*	*10.0*
Dec-16			*3.3*	*1.7*	*7.8*	*1.9*	*18.4*	*250*	*4.2*	*7.3*	*18.3*	*0.99*	*8.8*
Mar-17			*2.7*	*1.1*	*7.2*	*1.6*	*11.1*	*227*	*4.8*	*7.6*	*22.5*	*0.71*	*11.3*
Jun-17			*2.7*	*2.8*	*6.7*	*1.2*	*10.6*	*174*	*2.0*	*7.1*	*6.1*	*2.2*	*16.5*
Sep-17			*2.4*	*1.3*	*7.0*	*1.9*	*16.4*	*191*	*4.1*	*7.1*	*9.6*	NS	*8.7*
Dec-17			*4.0*	*1.3*	*7.3*	*1.8*	*9.3*	*178*	*3.6*	*6.7*	*21.2*	NS	*9.5*

Sauget Area 2, Site R
Quarterly Groundwater
Monitoring Well Data
1,4-Dichlorobenzene (ug/L)

BWMW-4D
214
103
55.0
74.6
75.0
70.4
80.4
73.6
58.5
84.0
61.7
66.4
60.4
52.5
58.1
59.4
60.9
77.5
60.8
65

ATTACHMENT 4 – Figures

Figure 1: Site R Location



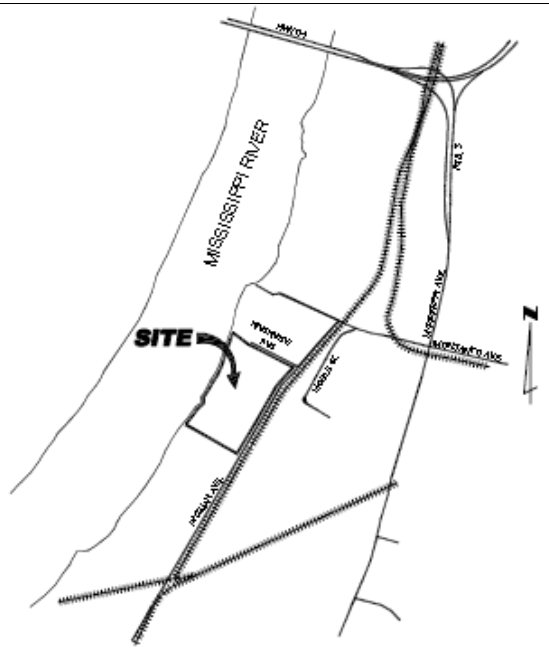


Figure 2: Sauget Area 2 Sites

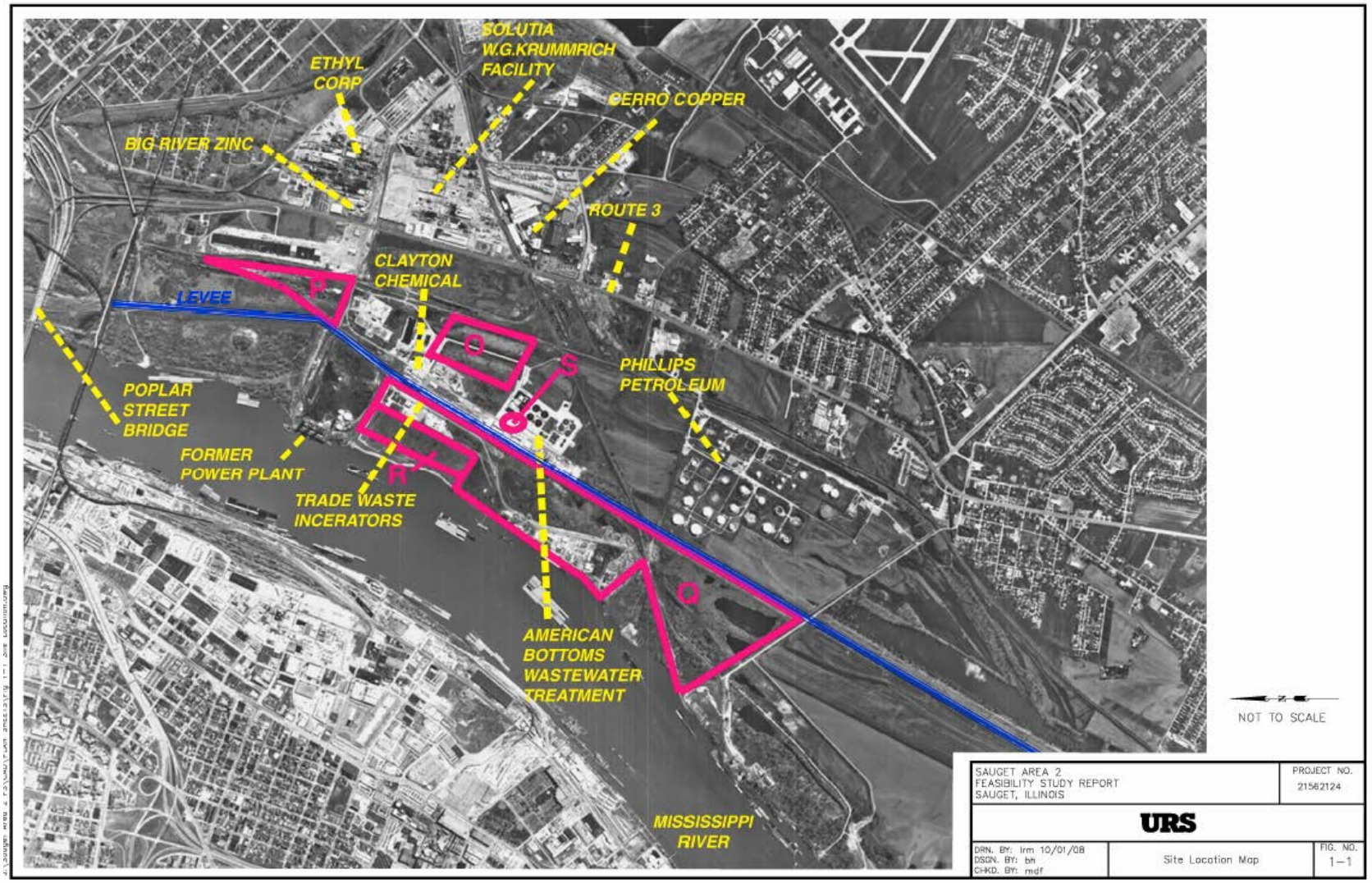


Figure 3: Industrial Areas

Figure 4: GCMS Layout

Figure 5: Piezometer and Well Locations

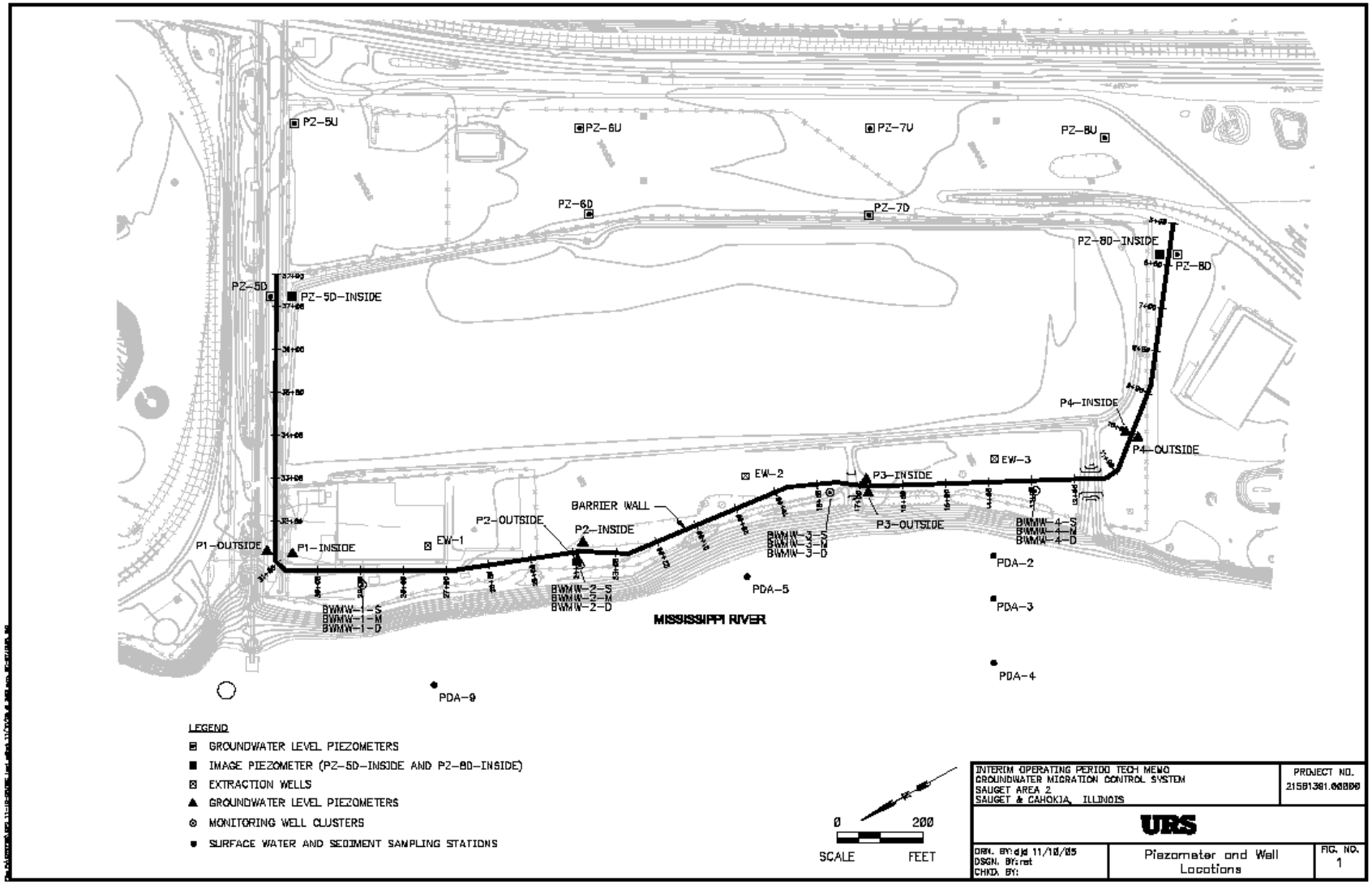
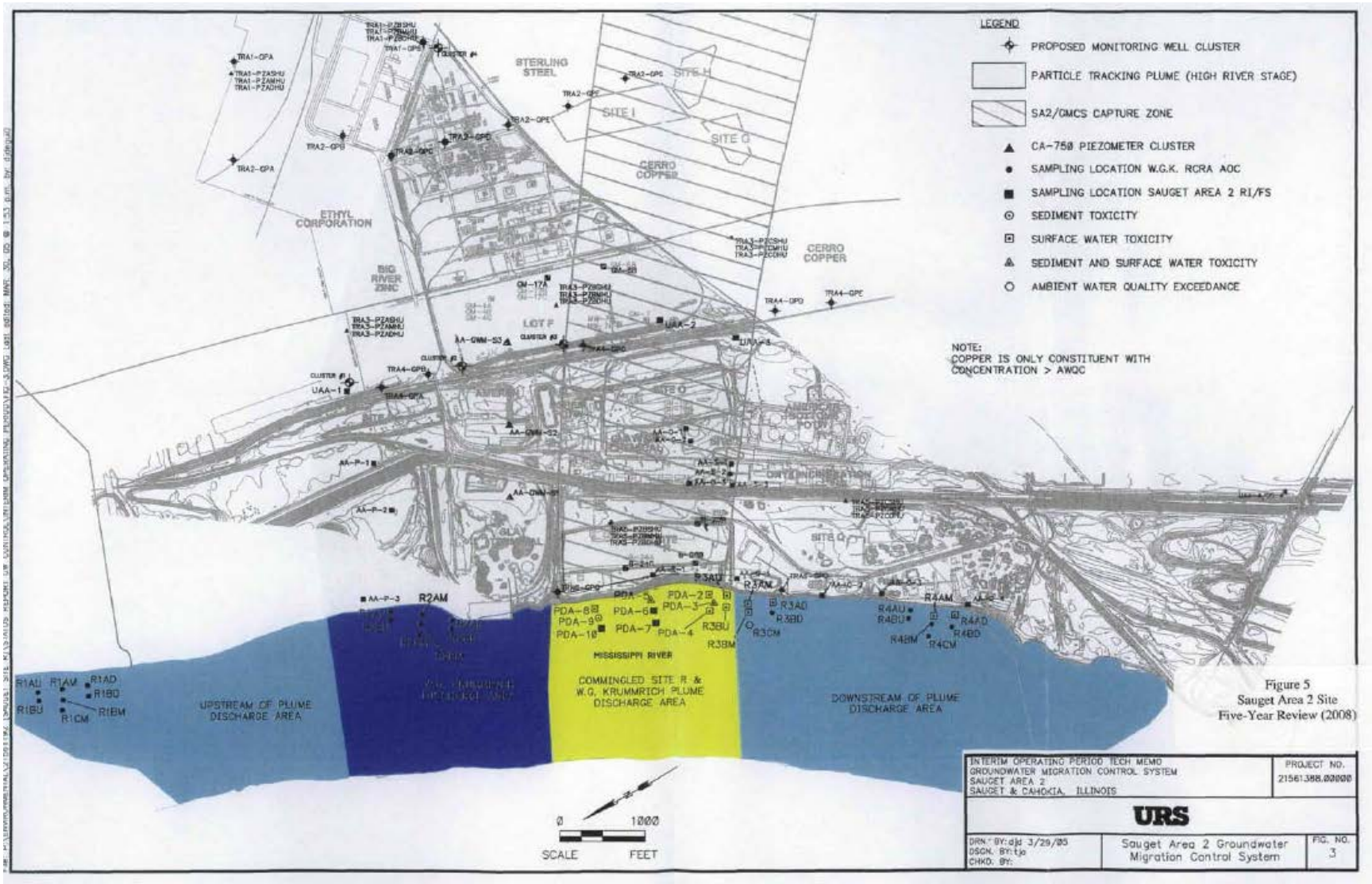


Figure 6: Plume Discharge Areas



ATTACHMENT 5 – Ordinances

Run Date :12/13/2005

DLC Assignment Form

Assignment ID :4639
Subject :Cahokia/Amoco Oil Co. #5335
Subject Type :Ordinance Review
DLC In Date :12/13/2005
DLC File No. :
Correspondence No. :R05121302

DLC Completed Date. :

Assigned Staff:
Geving, Kim Attorney

Project Details:
Status Issued Date: 12/13/2005 Due Date: 2/1/2006
Please review ordinance for Cahokia

Comments:

ORDINANCE NO. 05-1086

AN ORDINANCE AMENDING CHAPTER 1042.08-"REGULATIONS GOVERNING USE OF WATERWORKS SYSTEM BY THE ADDITION OF SUBPARAGRAPH "Q"

WHEREAS, certain properties with the City of Cahokia (the "City") have been used over a number of years as gas stations; and

WHEREAS, because of said use, concentrations of certain chemical constituents in the groundwater beneath these properties may exceed Class I groundwater standards for potable resource groundwater as set forth in 35 Ill. Adm. Code 620 or Tier One residential remediation objectives as set forth in 35 Ill. Adm. Code 742; and

WHEREAS, the City wishes to limit potential threats to human health from groundwater contamination while facilitating the redevelopment and productive reuse of properties that are the source of said chemical constituents;

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL, OF THE CITY OF CAHOKIA, ST. CLAIR COUNTY, ILLINOIS as follows:

SECTION I: RECITALS. The facts and statements contained in the preamble to this Ordinance are found to be true and correct and are hereby adopted as part of this Ordinance.

SECTION II: AMENDMENT. The Codified Ordinances of the City of Cahokia, Chapter 1042.08 – Regulations Governing Use of Waterworks System is hereby amended by the addition of the following subparagraphs:

1042.08 REGULATIONS GOVERNING USE OF WATERWORKS SYSTEM:

(q) As a result of potential groundwater contamination as identified by the IEPA under certain parcels of land, no person (including the City and any other unit of government) shall drill or install any potable water supply well or use any well for the purpose of obtaining a potable water supply within a 855 foot radius of the following parcel:

(i) Parcel Number 01-35-108-017

SECTION III: SAVINGS CLAUSE. If any section, subsection, or sentence, clause, or phrase of this ordinance is for any reason held to be invalid, such decision or decisions shall not affect the validity of the remaining portions of this ordinance.

SECTION IV: REPEALER. Any ordinances, resolutions, and parts of ordinances and resolutions in conflict with this ordinance are hereby repealed.

SECTION V: EFFECTIVE DATE. This ordinance shall be effective immediately upon passage.

ADOPTED this 7th day of July, ~~2004~~ 2005, pursuant to a roll call vote as follows:

APPROVED by me this 7th day of July, ~~2004~~ 2005.

By: Frank Bergman
Frank Bergman, Mayor
City of Cahokia, St. Clair County, Illinois

ATTESTED:

Filed in my office and published this 7th day of July, ~~2004~~ 2005

By: Norma Jones
City of Cahokia, St. Clair County, Illinois

Peggy A. Torry

OFFICIAL SEAL
Peggy A. Torry
Notary Public, State of Illinois
My Commission Expires 07/25/09

OFFICIAL SEAL
Peggy A. Torry
Notary Public, State of Illinois
My Commission Expires 07/25/09

CLERK'S CERTIFICATE

I, Norma Jones, Clerk of the Village of Cahokia, do hereby certify that I am the duly qualified and acting Village Clerk of the Village of Cahokia, Illinois , and as such I am the keeper of the records and files of the Board of Trustees of said Village.

I further certify that the foregoing is a full, true and complete transcript of Ordinance No. 05- 1086 , being "AN ORDINANCE OF THE VILLAGE OF CAHOKIA, AN ORDINANCE AMENDING CHAPTER 1042.08-"REGULATIONS GOVERNING USE OF WATERWORKS SYSTEM BY THE ADDITION OF SUBPARAGRAPH "Q" and is a true and correct copy of the original thereof now on file in my said office.

DATED this 20TH day of OCTOBER, 2005.

Norma Jones
Village Clerk

(SEAL)

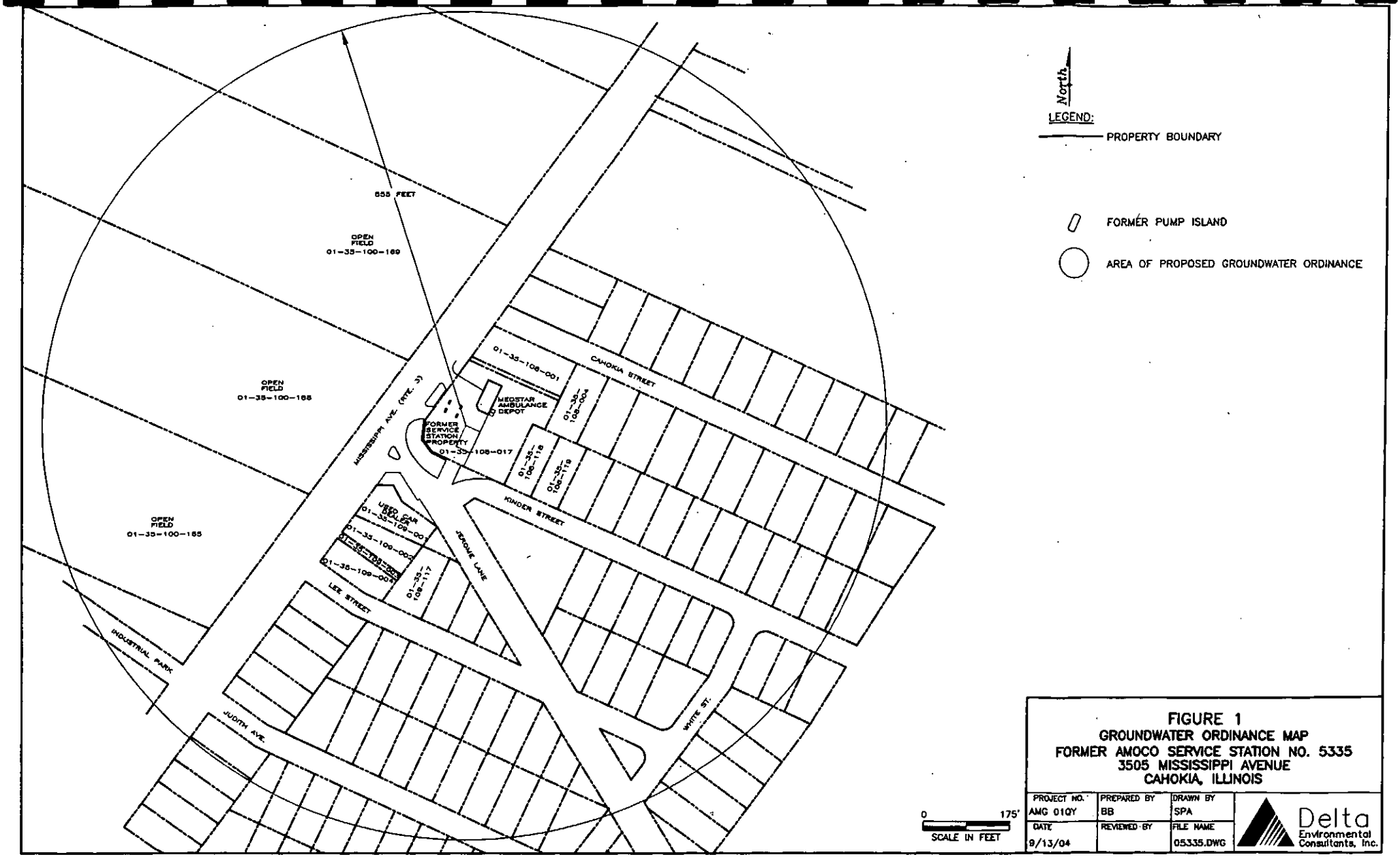


FIGURE 1
GROUNDWATER ORDINANCE MAP
FORMER AMOCO SERVICE STATION NO. 5335
3505 MISSISSIPPI AVENUE
CAHOKIA, ILLINOIS

PROJECT NO.	PREPARED BY	DRAWN BY
AMG 01QY	BB	SPA
DATE	REVIEWED BY	FILE NAME
9/13/04		05335.DWG

Delta Environmental Consultants, Inc.

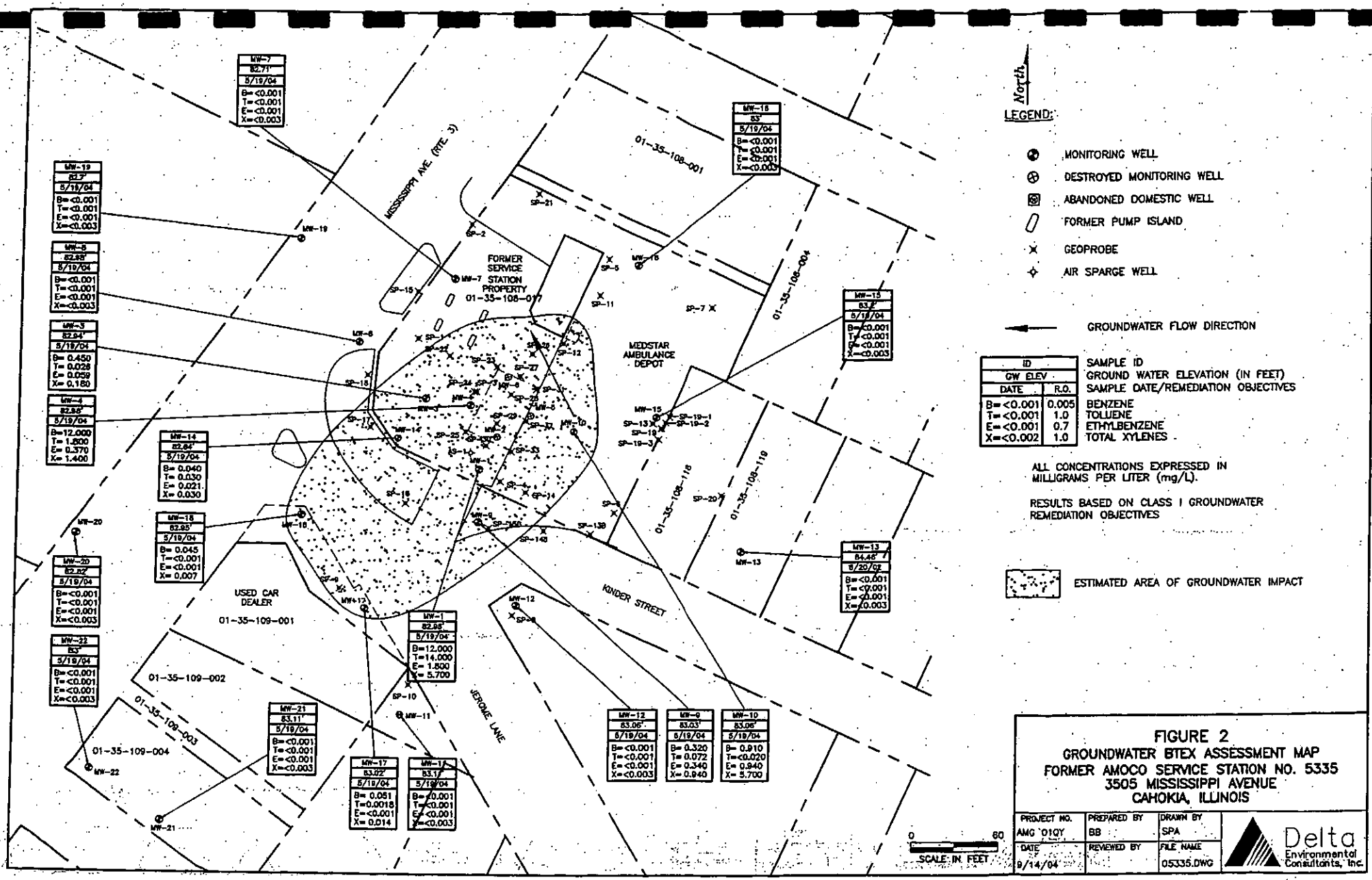


FIGURE 2
GROUNDWATER BTEX ASSESSMENT MAP
FORMER AMOCO SERVICE STATION NO. 5335
3505 MISSISSIPPI AVENUE
CAHOKIA, ILLINOIS

PROJECT NO.	PREPARED BY	DRAWN BY
AMG '01QY	BB	SPA
DATE	REVIEWED BY	FILE NAME
9/14/04		05335.DWG

Delta Environmental Consultants, Inc.

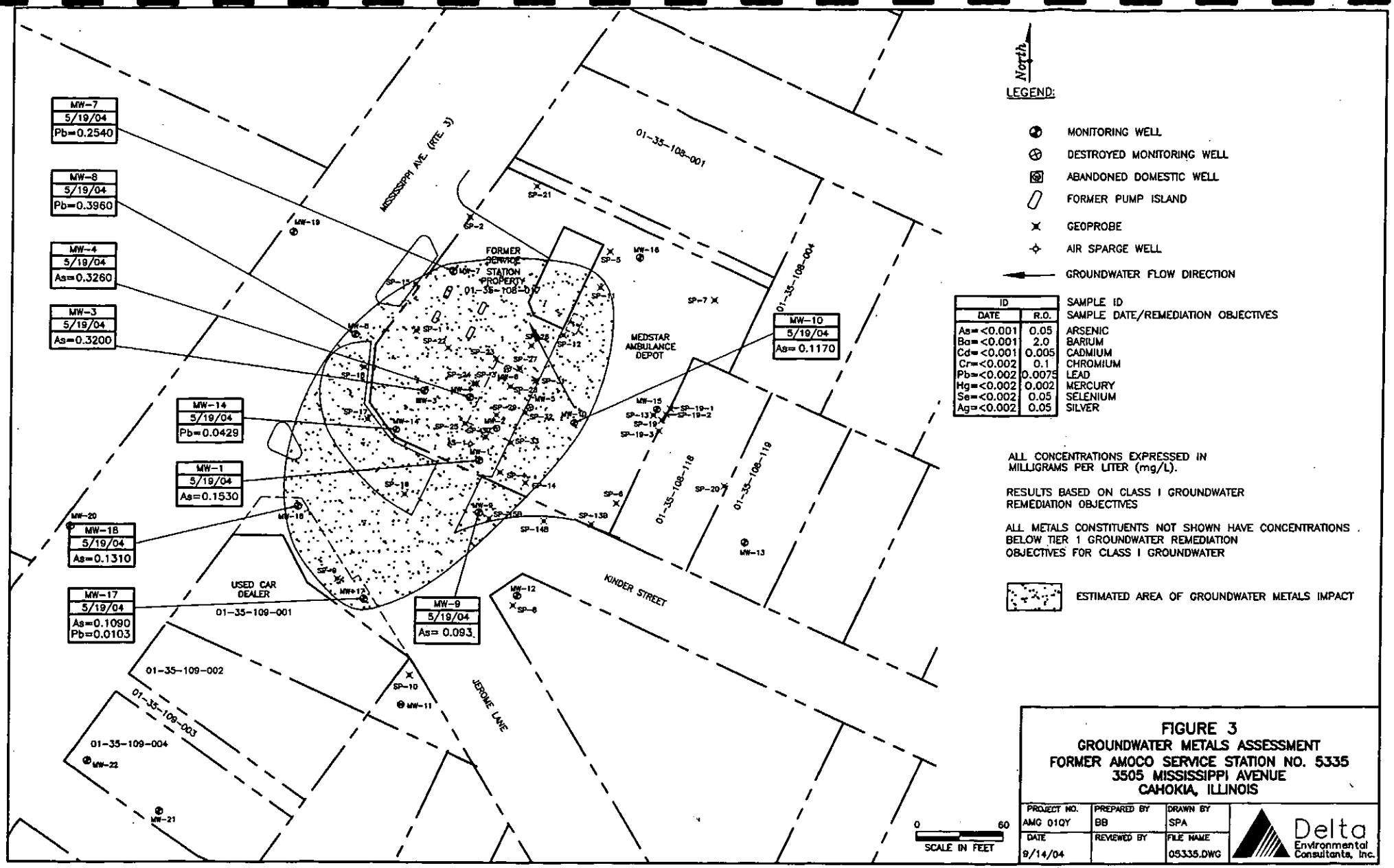


FIGURE 3
GROUNDWATER METALS ASSESSMENT
FORMER AMOCO SERVICE STATION NO. 5335
3505 MISSISSIPPI AVENUE
CAHOKIA, ILLINOIS

PROJECT NO.	PREPARED BY	DRAWN BY
AMG 01QY	BB	SPA
DATE	REVIEWED BY	FILE NAME
9/14/04		05335.DWG

Delta Environmental Consultants, Inc.

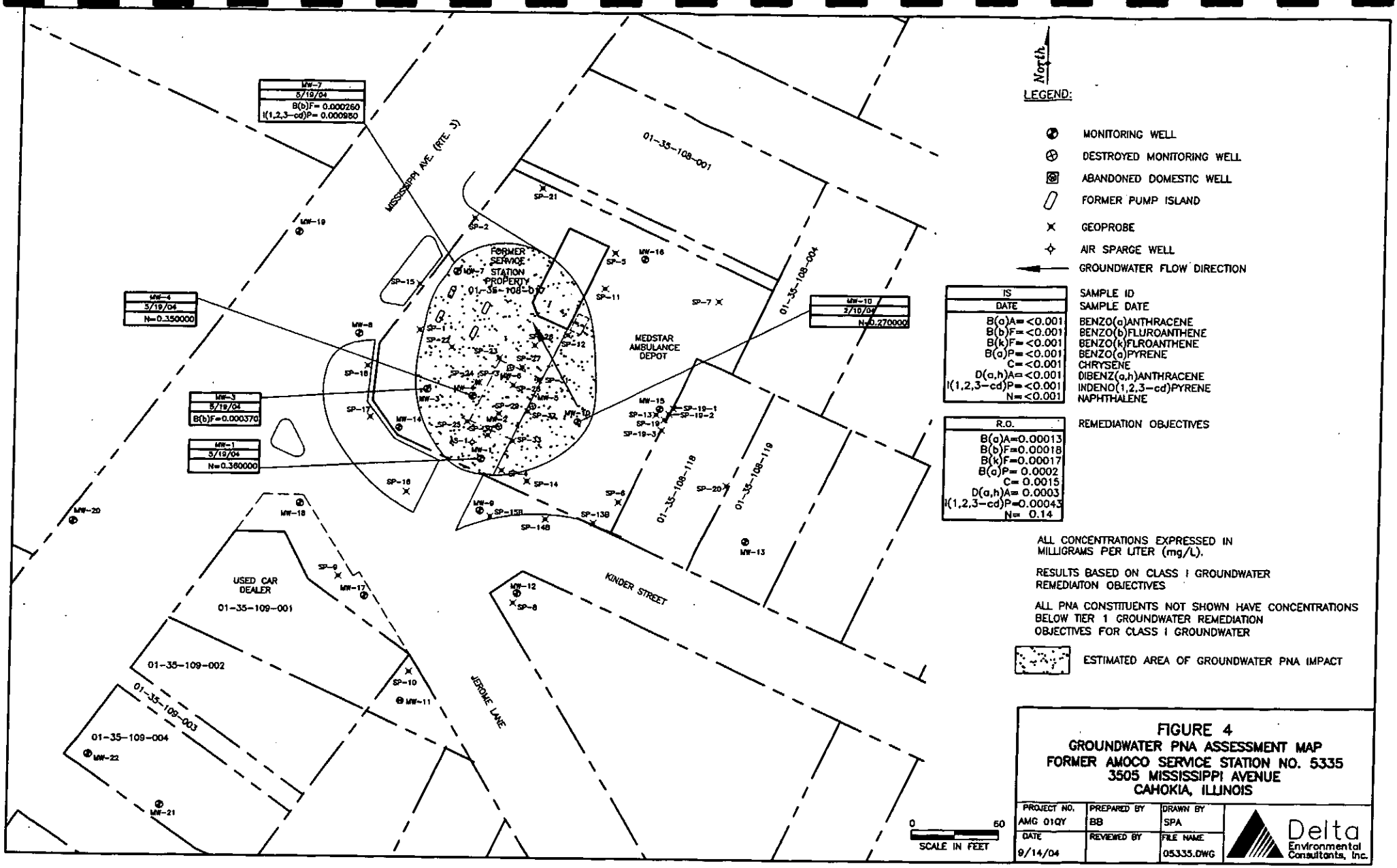


FIGURE 4
GROUNDWATER PNA ASSESSMENT MAP
FORMER AMOCO SERVICE STATION NO. 5335
3505 MISSISSIPPI AVENUE
CAHOKIA, ILLINOIS

PROJECT NO.	PREPARED BY	DRAWN BY
AMG 01QY	BB	SPA
DATE	REVIEWED BY	FILE NAME
9/14/04		05335.DWG

Delta Environmental Consultants, Inc.

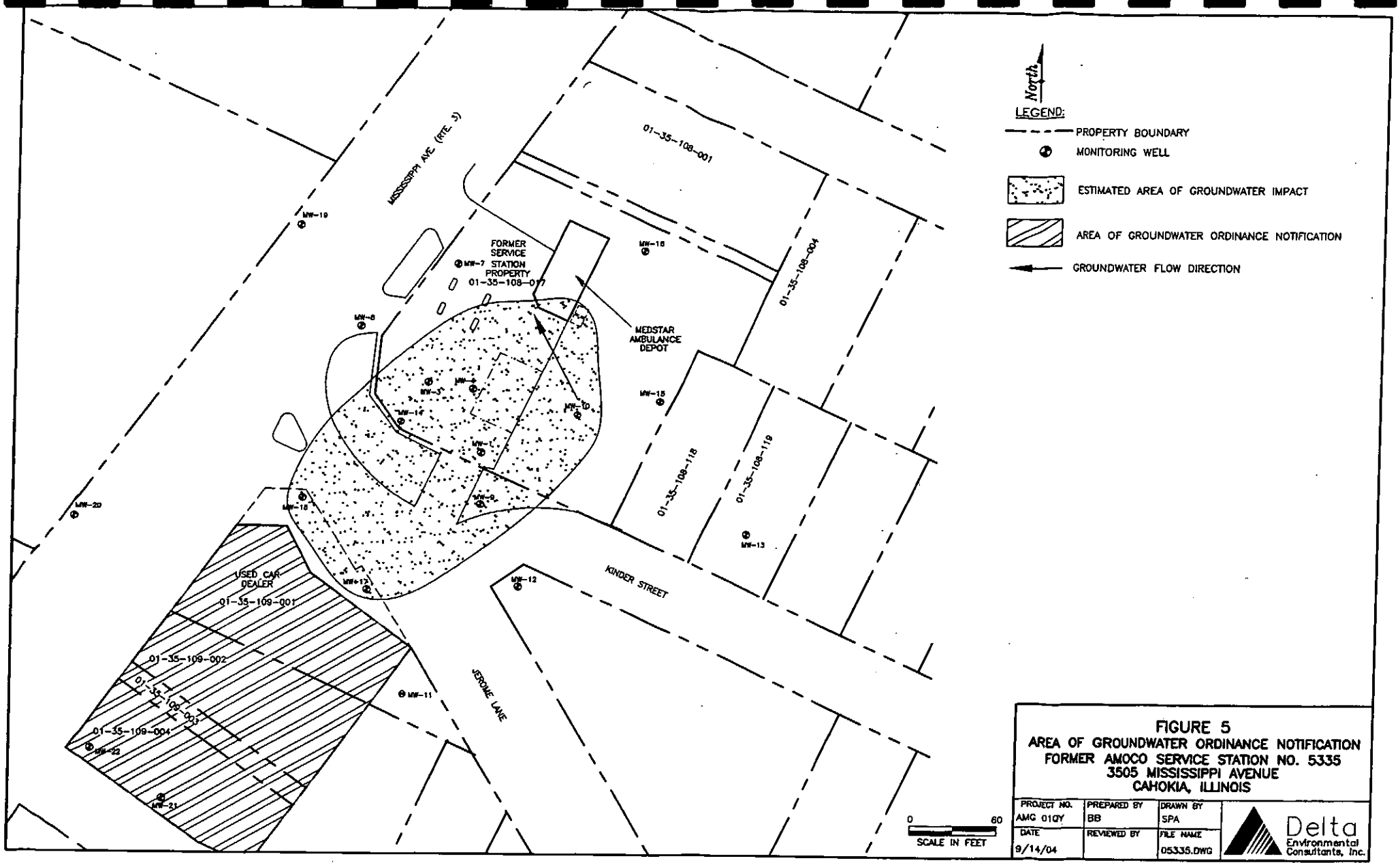


FIGURE 5
AREA OF GROUNDWATER ORDINANCE NOTIFICATION
FORMER AMOCO SERVICE STATION NO. 5335
3505 MISSISSIPPI AVENUE
CAHOKIA, ILLINOIS

PROJECT NO.	PREPARED BY	DRAWN BY
AMG 01QY	BB	SPA
DATE	REVIEWED BY	FILE NAME
9/14/04		05335.DWG

Delta Environmental Consultants, Inc.

Municipality: East St Louis

County: St. Clair

LPC Number:

OC: 98021001

RECEiVEC

FEB v 5 1998

IEPA/BOL

East Saint Louis

Illinois

CITY CLERK'S CERTIFICATE

STATE OF ILLINOIS,
ST. CLAIR COUNTY
CITY OF EAST ST. LOUIS,

I, Alzada Christian-Carr

CITY CLERK FOR THE CITY OF EAST ST. LOUIS, ILLINOIS, DO HEREBY CERTIFY THAT THE ABOVE AND FOREGOING IS A TRUE AND CORRECT COPY OF

An Ordiance prohibiting the use of Groundwater as a potable water supply; instituted to protect the safety, health and welfare of local residents and provide protective covenants to facilitate the redevelopoment and re-use of property in the City of East St, r.oujs

PASSED: November 13, 1997 By The Board of Councilmen and Mayor Gordon D. Bush

And I Further Certify That the Original Ordinance

Of Which The Foregoing Is A Certified Copy, Is By Law Intrusted To My Custody For Safe Keeping, And Is On File In My Office.

WITNESS My Hand And The Corporate Seal Of Said City,

This 3rd **Day of** February **A.D. 19** 98

-- /J/1. 7'J. j/!!:. ---

Alzada

City Clerk Of East St. Louis, Illinois

ORDINANCE# 97 -·- / ≤) 6 t t

AN ORDINANCE PROHIBITING THE USE OF GROUNDWATER AS A , POTABLE WATER SUPPLY; INSTITUTED TO PROTECT THE SAFETY, HEALTH AND WELFARE OF LOCAL RESIDENTS AND PROVIDE PROTECTIVE COVENANTS TO FACILITATE THE REDEVELOPMENT AND RE-USE OF PROPERTY IN THE CITY OF EAST ST. LOUIS.

WHEREAS: the City of East St. Louis, St. Clair County, Illinois (the 'City'), is a duly created, organized and validly existing municipality of the State of Illinois under the 1970 Illinois Constitution (the 'Constitution') and the laws of the State of Illinois, including particularly the Illinois Municir,al Code, and all laws amendatory thereof and supplementary thereto *(Chapter 65, Act 5, Illinois Compiled Statutes (1994);* the 'Code'); and

WHEREAS: the City is a 'home rule unit' under Section 6(a) of Article VII of the Constitution and, a such, may exercise any power or perform any function pertaining to its government and affairs including, but not limited to, the power to tax and the power to incur debt, and the power to protect the health and promote the welfare of its citizens; ar:1.d

WHEREAS: The City of East St. Louis may enter into a Redevelopment Plan and Planed Units Development Agreement that may be made a part of this Ordinance by reference.

Section One. Use of groundwater as a potable supply prohibited.

EXCEPT FOR SUCH USES OR METHODS IN EXISTENCE BEFORE THE EFFECTIVE DATE OF THIS ORDNANCE, The use or an attempt to use as a potable water supply, groundwater from within the corporate limits of the City of East St. Louis by the installation or drilling of wells or by any other methods is hereby prohibited.

Section two. Penalties.

Any person violating the provisions of this ordinance shall be subject to a fine of up to five hundred dollars ($500.00) for each violation.

Section three. Definitions.

"Persons" is any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdi ,,ision, or any entity, or their legal representative, agents or assiQ :1s.

"Potable water" is any water used for human or domestic consumption, including, but not limited to, water used for drinking, bathing, swimming, washing dishes, or preparing foods.

Section four. Repealer.

All ordinances or parts of ordin nces in conflict with this ordnance are hereby repealed insofar as they are in conflict with this ordinance.'

Section five. Severability.

If any provision of this ordinance or its a·pplication to any person or under any circumstances is a cljudged invalid, such adjudication shall not effect the validity of the ordinance as a whole or any portion not adjudged invalid .

Section six. Effective date.

This ordinance shall be in full force and effect upon passage, approval and publication as required by law.

The City Council of the City of East St. Louis herein authorizes the Mayor and or City Manager to implement and sign any and all corresponding and necessary government regulatory documents to implement this Gr ound Water Safety and Public Health Protection Ordinance, herein passed; via any and all necessary Memorandum of Understandings (MOU) already passed by City Council or deemed to be

nedessary by and between the City of East St. Louis and the appropriate and or necessary Environmental Protection Agencies (i. e. The Illinois Environmental Protection Agency, IEPA; the United States Environmental Protection Agency including U. S. EPA Region V; and or the State of Illinois Department of Natural Resources (DNR), and or appropriate County Agencies and/or the Financial Advisory Authority, including the proper recording and posting of any and all material concerning this Ordinance and those Agreements and Memorandum of Understandings (MOU's) affecting this Ordinance.

BY:

GORDON D. BUSH, MAYOR Date

SIGNED: November 13, 11

PASSED: November 12, 1997

FILED: _____

RECORDED: _____

ATTEST:

ALZIADA C. CARR, CITY CLER}<

Explanatory Statement - Ordinance prohibiting the use of groundwater as a potable water SL!pply (Union Bank Project)

The following is a brief description of why a Groundwater Ordinance is needed, why it has been modified, and where we are with the groundwater problem in Metro-East St. Louis, and specifically at the Union Bank site.

The City has groundwater contamination; any infiltration into the groundwater from specific contaminated soil exacerbate the probler;1. The state will not allow such conditions to exist for selected contaminates.

The problem ... when the City seeks to redevelop and reuse its commercial and industrial sites, odds are some form of contaminate may likely exist. We housed many polluters of yesterday. Keep in mind, even old highway routes from the era of leaded automotive gasoline users, spewing contaminates onto the ground adjacent and along the right-of-way. This oftentimes resulted in *(lead contaminated sites).*

Other sites in our City may actually have been leaden with night dumping and manufacturers who processed products no longer tolerable. To reuse this land, *'someone'* must comply with all federal, state and local regulations pertaining to any contaminates above Tier I level, if the site is to be reused and/or revitalized in accordance with current law.

The mechanism available in the Stile of Illinois for site rJmediation/reuse and redevelopment of Brownfields where actual contaminates exist, is to comply with the State of Illinois EPA Voluntary Clean-up Program and site remediation. This is the process the City selected, the re-utilization of the Union Bank Drive-up/Office Complex site. The guidelines call for several safeguards: Clean up and removal of contaminates; engineered barrier, mechanisms pul in place to prevent any further contamination; institutional controls, etc.

This Groundwater Ordinance is an Institutional Control required by the IEPA. It was approved by our City Council in the forr 1 IEPA dictated and required verbatim. However, another important IEPA entity made re, isions, that he said is also required.

Terry Bruckert, of Hinshaw and Culbert on, revised the first 'Ordinance' that was approved by Council. Also, he has reviewed the at·ached Ordinance, as well as the one for CH2MHill. I don't recommend we do anything to fre first Ordinance that has already been passed. If in conflict, which it isn't, there is a repealer clause in it.

Once this Ordinance is passed, we will need the Memorandum of Understanding (MOU) by and between the IEPA and the City of i~:ast St. Louis. I have suggested it be in a Planned Units Development (PUD) for the Union Bank development, in order to cover the process properly.

City of East St. Louis

City Boundary Map

/\/ Streets.shp
1990 Census Tract.shp
lffi:;J:\,;j)lj 500400
[O£] 500500
g 500600
IIIj 500900
Ill 501000
lilt 501100
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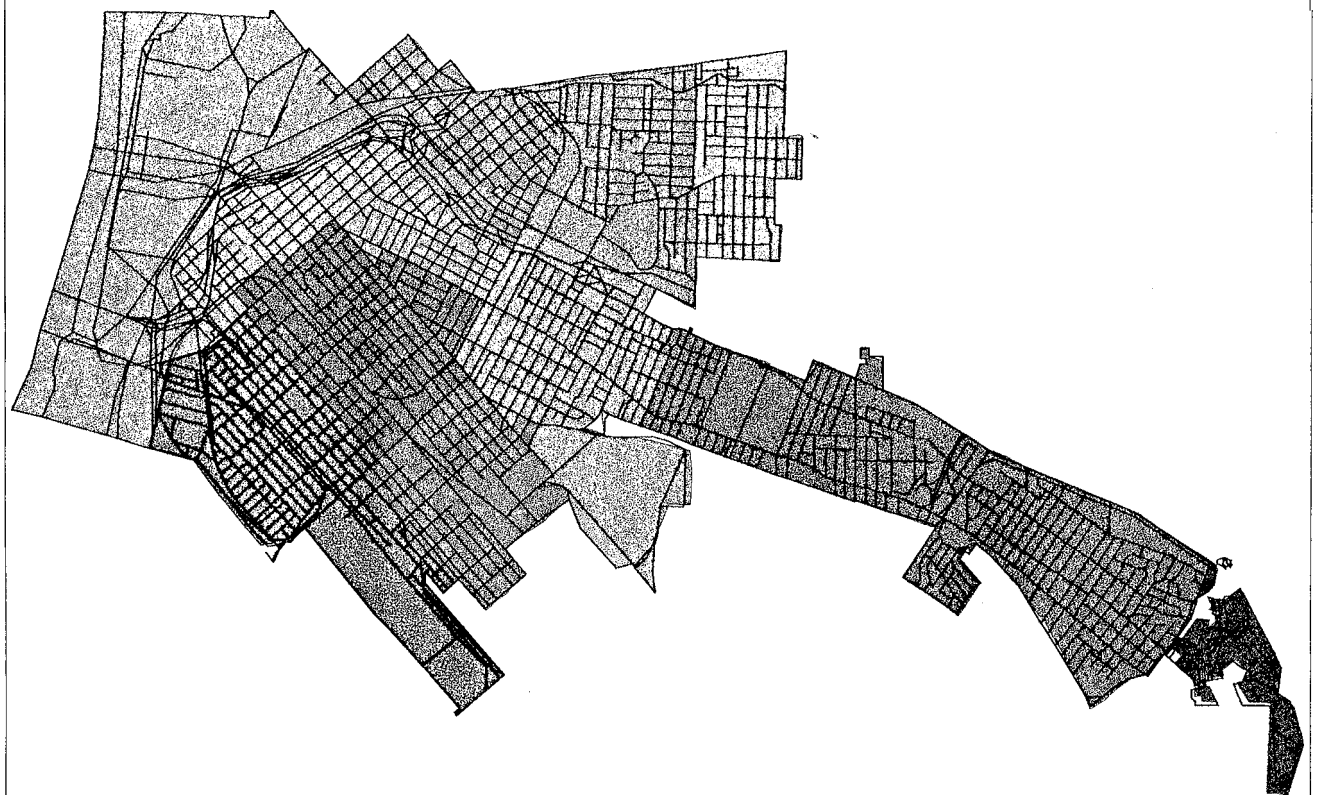

Prepared
by
CDBG Operations Corporation

June 1998

MEMORANDUM OF UNDERSTANDING BETWEEN CITY *DE* E. ST. LOUIS, IL. *Al"'\TD* THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY REGARDING THE USE OF A LOCAL GROUNDWATER OR WATER WELL ORDINANCE AS AN E\'VIRONMENTAL INSTITUTIONAL CONTROL

I. PURPOSE AND INTENT

A. This Memorandum of Understanding ("MOU") between CITY OF E. ST. LOUI S , IL. and the Illinois Environmental Protection Agency ("Illinois EPA") is entered into for the purpose of satisfying the requirements of 35 Ill. Adm. Code 742.1015 for the use of groundwater or water well ordina..T1ces as environmental institutional controls. The Illinois EPA has reviewed the groundwater or water well ordinance of the City of **EAST ST.** LOUIS. IL. (Attachment A) and determined that the ordinance prohibits the use of groundwater for potable purposes and/or the installation and use of new potable water supply wells by private entities but does not expressly prohibit those activities by the unit oflocal government itself. In such cases, 35 Ill. Adm. Code 742.1015(a) provides that the unit of local government may enter into an MOU with the Illinois EPA to allow the use of the ordinance as an institutional control.

B. The intent ofthis Memorandum ofUnderstandmg is to specify the responsibilities that must be assumed by the unit of local government to satisfy the requirements for MOUs as set forth at 35 Ill. Adm. Code 742.1015(i).

II. DECLARATIONS AND ASSillvIPTION OF RESPONSIBILITY

In order to ensure the long-term integrity of the groundwater or water well ordinance as an environmental institutional control and that risk to human health and the environment from contamination left .in place in reliance on the groundwater or water well ordinance is effectively managed, EAST SAINT LOUIS hereby assumes the following responsibilities pursuant to 35 Ill. Adm. Code 742.1015(i):

A. EAST **SAINT** LOUIS will notify the Illinois EPA Bureau of Land of any proposed ordinance changes or requests for variance at least 30 days prior to the date the local government is scheduled to take action on the proposed change or request (35 Ill. Adm. Code 742.1015(i)(4));

B. EAST **SAINT** LOUIS will maintain a registry of all sites within its corporate limits that have received "No Further Remediation" determinations from the Illinois EPA (35 Ill. Adm. Code 742.1015(i)(5));

C. EAST **SAINT** LOUIS will review the registry of sites established under paragraph II. B. prior to siting public potable water supply wells within the area covered

by the ordinance (35 Ill. Adm. Code 742.1015(i)(6)(A));

D. EAST **SAINT** r.aurs will determine whether the potential source of potable water has been or may be affected by contamination left in place at the sites tracked and reviewed under paragraphs II. B. and C. (35 Ill. Adm. Code 742.1015(i)(6)(B)); and

E. EAST **SAINT** LOUIS will take action as necessary to ensure that the potential source of potable water is protected from contamination or treated before it is used as a potable water supply (35 Ill. Adm. Code 742.1015(i)(6)(C)).

NOTE: Notification under paragraph II. A. above or other communications concerning this MOU should be directed to:

Manager, Division of Remediation Management
Bureau of Land
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, IL 62794-9276

III. SUPPORTING DOCUMENTATION

The following documentation is required by 35 Ill. Adm. Code 742.1015(i) and is attached to this MOU:

A. Attachment A: A copy of the groundwater or water well ordinance certified by the city clerk or other official as the current, controlling law (35 Ill. Adm. Code 742.1015(i)(3));

B. Attachment B: Identification of the legal boundaries within which the ordinance is applicable (certification by city clerk or other official that the ordinance is applicable everywhere. within the corporate limits; if ordinance is not applicable throughout the entire city or village, legal description and map of area showing sufficient detail to determine where ordinance is applicable) (35 Ill. Adm. Code 742.1015(i)(2));

C. Attachment C: A statement of the authority of the unit oflocal government to enter into the MOU (council resolution, code of ordinances, inherent powers of mayor or other official signing MOU -- attach copies) (35 Ill. Adm. Code 742.1015(i)(l)).

IN WITNESS WHEREOF, the lawful representatives of the parties have caused this MOU to be signed as follows:

FOR: **CITY OF EAST SAINT LOUIS, ILLINOIS**
(Name of city or village)

BY: _____ **MAYOR** DATE:MAY 19, 1998
(Name and title of signatory)

FOR: Illinois Environmental Protection Agency

BY: Gary P. King Manager, Division of Remediation Management DATE: June 29, 1998
(Name and title of signatory)

F:IWPS!lgwordrev\MODELMOU.001

ATTACHMENT 6 - Public Notice

Legals

PUBLIC NOTICE NOTICE OF PUBLIC HEARING BEFORE THE ST. CLAIR COUNTY ZONING BOARD OF APPEALS

RE: 2018- 08- ABV

Notice is hereby given that a public hearing will be held before the Zoning Board of Appeals of St. Clair County, Illinois, on Monday, July 16, 2018 at 7: 10 P.M., in the County Board Room, 5th Floor, St. Clair County Building, #10 Public Square, Belleville, Illinois, at which time and place the Board will consider the proposed variation to the County Zoning Ordinance as follows:

To consider a request for an Area/ Bulk Variance to allow the division of 25.4- acres into two tracts with 12. 5- acres each in an "A" Agricultural Industry Zone District, on the following described property: All of the SW 1/ 4 of the SE 1/ 4 of Section 35, T. 1 N., R. 9 W., of the 3rd P.M., St. Clair County, Illinois containing 25.4- acres more or less.

Which is known as XXXX Etling Road, Millstadt, Illinois, in Millstadt Township.

Said request was made by Brian 86 Emily Marshall, 758 Lakeview Drive, Waterloo, Illinois, Owners and Brenda Chandler, 8745 Nike Road, Red Bud, Illinois, Applicant.

Dated this 23rd day of June, 2018.

ZONING BOARD OF APPEALS
ST. CLAIR COUNTY, ILLINOIS
BY: Anne Markezich, Secretary

L-P1351346 (June 23)

IN THE CIRCUIT COURT FOR THE TWENTIETH JUDICIAL CIRCUIT ST. CLAIR COUNTY, ILLINOIS

Notice For Publication

RE: ROYAL SPENCER 17JA105
DATE: **JUNE 7, 2018**
To: **UNKNOWN FATHERS** and to All Whom It May Concern:

Take notice that on **AUGUST 9, 2017** a petition was filed under the Juvenile Court Act by DCFS in the Circuit Court of St. Clair County entitled In the Interest of **ROYAL SPENCER** minor, and that in Juvenile Courtroom **#306** at Belleville, IL on the **JULY 23, 2018** at the hour of **09:00. AM** or as soon thereafter as this cause may be heard, and ad judicatory hearing will be held upon the petitioner to terminate parental rights under the Court Act. The court has authority as this proceeding to take from you the custody and guardianship of the minor. If the petition requests the termination of your parental rights and the appointment of a guardian with power to consent to adoption, you may lose all parental rights to the child.

UNLESS YOU APPEAR YOU WILL NOT BE ENTITLED TO FURTHER WRITTEN NOTICES OR PUBLICATION NOTICES OF THE PROCEEDINGS IN THIS CASE, INCLUDING THE FILING OF AN AMENDED PETITION OR A MOTION TO TERMINATE PARENTAL RIGHTS.

Now, unless you appear at the hearing and show cause against the petition, the petition may be taken for confessed as against you and each of you and an order, judgment, or decree entered.

Kahalah Clay,
Circuit Clerk
Dated: **JUNE 7, 2018**
By: **CHRISTINA Y. CROCKETT**

L-P1350734
(June 15, 22 & 29)

IN THE CIRCUIT COURT TWENTIETH JUDICIAL CIRCUIT ST. CLAIR COUNTY, ILLINOIS

In the Estate of
DOROTHY L. BANGERT,
Deceased

No. 18-P-283

CLAIM NOTICE

Notice is given of the death of DOROTHY L. BANGERT of Millstadt, Illinois. Letters of Office were issued on May 10, 2018 to Sarah A. Damann of 409 E. Washington St., Millstadt, Illinois 62260, whose attorney is Otto Faulbaum, 111 S. Main St., Suite A, Waterloo, Illinois 62298.

Claims against the estate must be filed in the Circuit Clerk's Office, St. Clair County Courthouse, 10 Public Square, Belleville, Illinois 62220, or with the Independent Executor, or both, on or before six months from the date of the first publication of this notice which was published on June 9, 2018, or three months after the date of delivery or mailing of the notice, whichever is later. Any claim not filed on or before that date is barred. Copies of a claim filed with the Clerk must be mailed or delivered by the claimant to the Independent Executor and to her attorney within ten days after it has been filed and proof thereof filed with the Clerk.

SARAH A. DAMANN,
Independent Executor

OTTO J. FAULBAUM
#0077781
111 S. Main St., Suite A
Waterloo, IL 62298
618/939-1812
otto@waterloolaw.com

L-P1350460
(June 9, 16 & 23)

IN THE CIRCUIT COURT OF ST. CLAIR COUNTY, ILLINOIS PROBATE DIVISION

Estate of
ELMER W. DINTELMANN
Deceased

No. 18-P-68

CLAIM NOTICE

Notice is given to creditors of the death of ELMER W. DINTELMANN. Letters of Office were issued on February 6, 2018 to Eugene Dintelmann and Elaine Hanradt, 1132 S. Charles Street, Belleville, IL 62220, as Executors, whose attorney of record is GEORGE E. DIEHR, JR., Polsinelli PC, 100 South Fourth Street, Suite 1000, St. Louis, Missouri 63102.

Claims against the estate may be filed in the Office of the Clerk of the Court in the St. Clair County Circuit Court, #10 Public Square, Belleville, Illinois, 62220-1623, or with the Executors, or both, within 6 months from the first date of publication of this Notice or, as to a claimant known to the Executors, within three (3) months of the date of mailing or delivery of this Notice to such claimant. Any claim not filed on or before that date is barred. Copies of a claim filed with the clerk must be mailed or delivered by the claimant to the Executors and to the Executors' attorney within ten days after it has been filed.

Atty. No.: 6289366
George E.Diehr, Jr.
Polsinelli PC
Atty. for
Independent Executor
100 South Fourth
Street, Suite 1000
St. Louis, MO 63102
Telephone:
314/889-8000

L-P1350480
(June 9, 16 & 23)

IN THE CIRCUIT COURT THIRD JUDICIAL CIRCUIT MADISON COUNTY, ILLINOIS

LAWRENCE HENDERSON,
Plaintiff,
vs.
CLEAN AS A WHISTLE, LLC, et al.
Defendants.

Case No.: 18-L-561

NOTICE BY PUBLICATION

NOTICE IS GIVEN YOU, All Unknown Owners of the premises whose common address is 22 Kettle River Drive, Glen Carbon, Illinois, that a Complaint At Law in the above-captioned cause has been filed in the Circuit Court of Madison County seeking damages in excess of $50,000.00 for personal injuries suffered and for other relief.

Unless you file your Appearance in this case in the Office of the Clerk of the Circuit Court, Madison County Courthouse, 155 North Main Street, Edwardsville, Illinois, 62025 on or before July 16, 2018, A JUDGEMENT OR DECREE BY DEFAULT MAY BE TAKEN AGAINST YOU FOR THE RELIEF ASKED IN THE COMPLAINT.

WITNESS, May 24, 2018
/seal/
/s/ Mark Von Nida
Clerk of the Court
By: T. Withers

Gregory L. Shevlin
Attorney for Plaintiff
12 West Lincoln St.
Belleville, IL 62220
(618)235-3500

L-P1350462
(June 9, 16 & 23)

PUBLIC NOTICE

State of Illinois
SS.
County of St. Clair

This is to certify that the undersigned transacting a business in the said County and State under the name of **Royal Housekeeping Service**, at the following post office address: 5720 North Belt West, Suite 20-257, Belleville, IL 62226, and that the true and real names of the persons owning, conducting, or transacting such business are as follows:

Barbara Zinn
Swansea, IL

L-P1350836
(June 16, 23 & 30)

PUBLIC NOTICE IN THE CIRCUIT COURT THE TWENTIETH JUDICIAL CIRCUIT ST. CLAIR COUNTY ILLINOIS

Taquella Perry
Petitioner,
vs.
Delandaus Griffin
Respondent,

Case No. 18-OP-187

PUBLICATION NOTICE

Affidavit of Publication having been filed, notice is hereby given to Delandaus Griffin, Respondent in cause number 18-OP-187, that Taquella Perry filed a Petition for Order of Protection and other relief on March 14, 2018, in the Unified Domestic Violence Court of St. Clair County and said petition is now pending and that unless you file your response in the Office of the Clerk on or before the 4th day of July 2018, a two year Order of Protection may be entered against you by default. Further, under the Emergency Order of Protection entered in this cause, you are not to have any contact with the Petitioner in this cause or you may be subject to arrest.

KAHALAH A. CLAY
Clerk of the
Circuit Clerk
By: Paula Bivins ,
Deputy
Date: 5-30-18

L-P1350366
(June 9, 16 & 23)

PUBLIC NOTICE

Name:
David Hensen
Address:
Alton, IL

Hereby inform that a petition for appointment of legal guardianship of Russell Hendrickson (DOB: 08/05/2004). The natural parents are John Hendrickson and Jessica Hendrickson. Last known address: St. Louis, MO (mother) and Alton, IL (father). Current whereabouts of both parents are unknown.

Is hereby informed of scheduled hearing in the Third Judicial Circuit, Madison County Illinois on July 10, 2018, Room 247, 1:30 pm.

Please contact Kayla Adams, Children's Home + Aid, 618-235-5335 ext. 440.

L-1350483
(June 9, 16 & 23)

PUBLIC NOTICE IN THE CIRCUIT COURT THE TWENTIETH JUDICIAL CIRCUIT ST. CLAIR COUNTY ILLINOIS

Reneshia Richards
Petitioner,
vs.
Dwayne Fair, Sr.
Respondent,

Case No. 18-OP-288

PUBLICATION NOTICE

Affidavit of Publication having been filed, notice is hereby given to Dwayne Fair, Sr., Respondent in cause number 18-OP-288, that Reneshia Richards filed a Petition for Order of Protection and other relief on April 24, 2018, in the Unified Domestic Violence Court of St. Clair County and said petition is now pending and that unless you file your response in the Office of the Clerk on or before the 4th day of July 2018, a two year Order of Protection may be entered against you by default. Further, under the Emergency Order of Protection entered in this cause, you are not to have any contact with the Petitioner in this cause or you may be subject to arrest.

KAHALAH A. CLAY
Clerk of the
Circuit Clerk
By: Paula Bivins ,
Deputy
Date: 5-30-18

L-P1350365
(June 9, 16 & 23)

PUBLIC NOTICE

ADVERTISEMENT FOR BID

CITY OF GRANITE CITY, ILLINOIS
2018 MCCD Hot Mix Asphalt Overlay Program
Madison County Community Development
Project Number 3838-171-21-05

Separate sealed bids for the 2018 MCCD (Madison County Community Development) Hot Mix As-phalt (HMA) Overlay Program will be received by the City Clerk in City Hall, Granite City, Illinois 62040, until **10:00 a.m., Tuesday, July 3rd, 2018**, at which time the bids will be publicly opened and read. Sealed bids should be labeled "2018 HMA OVERLAY PROGRAM, MCCD Contract No. 3838-171-21-05" on the outside of the envelope.

Bids that are forwarded by mail shall be addressed to the City of Granite City, 2000 Edison Ave-nue, Granite City, Illinois 62040.

This work will consist of furnishing all labor, equipment and materials to complete the following Street Improvements:

The proposed work consists of milling various depths of existing asphalt surfaced streets at vari-ous locations throughout Granite City. Including the application of the Tack Coat to various pav-ing locations in the City of Granite City. Also, the proposed work consists of supplying 2018 MCCD Hot Mix Asphalt (HMA) surface course material to the jobsite for paving by City forces. The HMA will be delivered to various locations throughout the City of Granite City to their paver, and the contractor shall provide seven to ten trucks a day as required by City forces paving op-erations.

Plans, specifications and contract documents may be obtained and examined at the office of the Engineer:

Juneau Associates, Inc., P.C.
2100 State Street
P.O. Box 1325
Granite City, Illinois 62040
(618) 877-1400

Plans, specifications and other contract documents are available for examination at South-ern Illi-nois Builders in O'Fallon, Illinois.

There is no deposit required for copies of the plans and specifications. However, a non-re-fundable charge of $10.00 is required for those plans and specifications sent via mail. Digital copies of the plans and specifications may be obtained at no cost upon Engineer's receipt of a completed re-quest/release form provided by Engineer.

The successful bidder will be required to execute and present a performance and payment bond in a sum equal to the full amount of the contract. Bids must be for the contract as a whole.

No bidder may withdraw his bid within ninety (90) days after the scheduled time of closing bids.

All bids must be made on forms furnished by the City of Granite City.

Minority Business Participation

There is a mandatory 10% minority participation in this project. Bidders on this project will be re-quired to comply with the Minority Business Participation Requirements as set forth in Section 00 73 13 of the specifications.

All applicable laws, ordinances, and rules and regulations of all authorities having jurisdic-tion over construction of the project shall apply to the contract.

This project is subject to availability of project funds and compliance with requirements of Madi-son County Community Development.

The City of Granite City reserves the right to waive, or not to waive, any irregularities in the bids; to reject any or all bids; and to determine which bid is the lowest and best for the improvements.

By Order of the City of Granite City
Ed Hagnauer, Mayor

L-831081 (June 23)

PUBLIC NOTICE

ADVERTISEMENT FOR BIDS

Sealed bids for the 1**2TH STREET - PAVEMENT RE-CONSTRUCTION** will be received by the VILLAGE OF EAST CARONDELET at the Village offices located at 950 State Street, East Carondelet, Illinois 62240, until 4:30 p.m. Wednesday, 27th day of June 2018. Bids received after that time will be returned unopened. Bids will be publicly opened and read aloud at a meeting of the Board of Trustees at a time and date to be determined.

Copies of the Drawings, Specifications and other Contract Documents may be examined at the following locations:

VILLAGE OF EAST CARONDELET SOUTHERN ILLINOIS BUILDERS ASSOC.
950 State Street 1468 Green Mount Road, PO Box 1390
East Carondelet, IL 62240 Oâ ™Fallon, IL 62269.
<Phone: (618)-286-4660> <Phone: (618)-624-9055>

Copies of the above documents may be **OBTAINED** from the **VILLAGE** or **ENGINEER** upon payment of $ 50.00 per set in the form of a cashierâ™s check, certified check, company check or money order payable to KREMER ENGINEERING L.L.C. to cover the cost of reproduction of the documents. No refund will be made.

Prevailing hourly wage rates for workmen will apply on this project.

Bid Security in the amount of **five (5) percent** of the Base Bid amount must accompany the Bid as stated in the Instruction to Bidders.

No bid may be withdrawn within ninety (90) days after the scheduled closing time for receipt of Bids.

The VILLAGE reserves the right to reject any and all bids, to waive irregularities
in the bids and to determine the lowest and best bid.

A portion of the funds for this project are being provided by a Community Development Grant from the Department of Housing and Urban Development, and all the requirements of this department must be followed. The contractor will be required to utilize minority business enterprises in the minimum amount of 15% of the total contract value.

The BASE BID work, in general, consists of the following units of work:

1. 12th STREETPAVEMENT RECONSTRUCTION (360' X 18')

Date: 14 May 2018 By: Herbert Simmons,
President of the Board of Trustees

L-830669 (June 16 & 23)

EPA

U.S. EPA Begins Review of Sauget Area 2 Superfund Site
Sauget, Illinois

U.S. Environmental Protection Agency is conducting its third five-year review of the Sauget Area 2 Superfund site located on the eastern side of the Mississippi River, bordered by the city of East St. Louis and the villages of Cahokia and Sauget, Ill. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment.

U.S. EPA's cleanup tackled the release of contaminated underground water (groundwater) to the Mississippi River near an area known as Site R. The cleanup consisted of a 140-foot deep barrier wall and a ground water extraction system. Together, the extraction wells are removing contaminated water, and the barrier wall is stopping the flow of contaminants to the Mississippi River. Groundwater is treated off-site before discharging to the river. Groundwater, sediment (mud) and surface water are being monitored for contamination. The review should be completed by this July.

More information is available at the Cahokia Public Library, 140 Cahokia Park Drive and at https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0500047.

The five-year review is an opportunity for you to tell U.S. EPA about site conditions and any concerns you have. Contact:

Stephanie Linebaugh
Remedial Project Manager
312-353-2315
linebaugh.stephanie@epa.gov

Cheryl Allen
Community Involvement Coordinator
312-353-6196
allen.cheryl@epa.gov

You may also call U.S. EPA toll-free at 800-621-8431, 8:30 a.m. to 4:30 p.m., weekdays.

PUBLIC NOTICE IN THE CIRCUIT COURT THE TWENTIETH JUDICIAL CIRCUIT ST. CLAIR COUNTY ILLINOIS

Marquela Caffey-Hopkins
Petitioner,
vs.
Victor Hopkins
Respondent,

Case No. 18-OP-213

PUBLICATION NOTICE

Affidavit of Publication having been filed, notice is hereby given to Victor Hopkins, Respondent in cause number 18-OP-213, that Marquela Caffey-Hopkins filed a Petition for Order of Protection and other relief on March 22, 2018, in the Unified Domestic Violence Court of St. Clair County and said petition is now pending and that unless you file your response in the Office of the Clerk on or before the 4th day of July 2018, a two year Order of Protection may be entered against you by default. Further, under the Emergency Order of Protection entered in this cause, you are not to have any contact with the Petitioner in this cause or you may be subject to arrest.

KAHALAH A. CLAY
Clerk of the
Circuit Clerk
By: Paula Bivins ,
Deputy
Date: 5-30-18

L-P1350363
(June 9, 16 & 23)

1 Auctions

CONSIGNMENT AUCTION
Sunday June 24th-9am
Mulberry Grove 62262
(Exit 52 off I-70)
Tractors, New skid loader attachments; hay & antique); ATV's, lawn & garden; cars, trucks & 150XLT, loaded; live-stock equip; tools & misc.
Thomas Factory Outlet - truckload-new bikes, trikes, tools & toys
10-12 WAGON LOADS OF TOOLS AND MISC.
www.auctionzip.com # 11809... accepting consignments Thursday June 21st 8-5 or by appointment. NO consignments accepted on sale day after 8am.
McDowell Auction Service
Alva R. & Andrew McDowell-Auctioneers
www.mcdowell auctions.com
618-267-3410

1b Estate Sales

ABES RUSTIC CABIN ESTATE SALE
Sat. & Sun. 6/23 & 24
8AM-2PM
2115 BOWLER RD. COLLINSVILLE
UNIQUE SMALL FARM ESTATE SALE - FEATURES AMERICANA OLD RUSTIC WOOD STRUCTURES, CARVED WOOD ART PIECES, OLD FARM WOOD, BIRD HOUSES, ROCKERS, FRIGIDAIRE SIDE X SIDE FRIDGE, 2 DR TABLE & CHAIRS, CURIO CAB., DAY BED, COLL. DISNEY WATER GLOBES & PERFUME ATOMIZERS, TINKERBELL COLLECTIBLES, CHINA, GLASS, CRYSTAL, FARM EQUIP TOOLS, ATQ POTATO PLOW, PUSH MOWERS, HAND TOOLS, BOOKS, PRIM BASKETS, CHILD PLAY SET CLIMBING ROCK WALL, OLD CHICKEN FEEDERS, WOOL ALPACA FOR NEEDLE FELTING, RAW LLAMA FIBER, FIRE PIT, BAMBOO TIKI DECK CHAIR, RAW WOOD, LONG CEDAR WOOD BOARDS, FIREWOOD, DR PINE KIT TABLE & CHAIRS, WINE RACK, PINE HIGH BOY CHEST & REGULAR CHEST OF DRAWERS, 2 STEEL WAGON WHEELS, NICE WICKER ROCKER, ANTQ DRY SINK & OAK JULIUS ANDRAE TELEPHONE, BENTWOOD RATTAN ROCKER, CHRISTMAS, MORE! **abesestatesales.com** or **977-8866**
NO text or email please

6 Personals

13 Meeting People

MEETING PEOPLE is a Classification we offer in the **Daily News-Democrat**

1-8 lines for 5 days is $31.00, and each additional line is $1.45. Prepayment is required.

Anyone replying to these ads must include a $1.00 processing fee. For additional information, call our advisors at 234-7000.

16 Medical

19 Part Time

Bartender, part-time, exp only. Apply in person at 6555 Fox Creek Drive, Edwardsville, Mon-Fri 9 am – 2pm. Ask for Linda

Kiosk Subscription Sales

We are a marketing company that grows newspaper readership by promoting home delivery subscriptions of The Belleville News-Democrat at local grocery/retail stores. We are seeking outgoing, self-motivated, professional independent contractors with good people skills. Sales background a plus but not required. We seek energetic people to represent The News-Democrat at major brand stores and events. Management opportunities available for the right person.

~Must be 18 years of age, or older.

~Must have a valid driver's license and reliable transportation.

~Must be available week-ends

Compensation is commission based only with no hourly rate.

For consideration email your resume to careers@trustedkiosk.com

1 Auctions

ATTACHMENT 7 – Site Inspection Checklist

Site Inspection Checklist

I. SITE INFORMATION	
Site name: **Sauget Area 2 Superfund Site– Site R**	**Date of inspection:** **4/24/2018**
Location and Region: **Sauget, IL / Region 5**	**EPA ID:** **ILD000605790**
Agency, office, or company leading the FYR: EPA	**Weather/temperature:** Overcast / 62 F

Remedy Includes: (Check all that apply)

☐ Landfill cover/containment	☐ Monitored natural attenuation
☐ Access controls	☒ Groundwater containment
☐ Institutional controls	☒ Vertical barrier walls
☒ Groundwater pump and treatment	☐ Other: Click or tap here to enter text.
☐ Surface water collection and treatment	

Attachments:

☐ Inspection team roster attached	☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M Site Manager** **Steve Smith, Project Manager, 4/24/2018**

   Interviewed: ☒ at site ☐ at office ☐ by phone Phone Number: Click here to enter text.

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

2. **O&M Staff** **Bill Johnson, Project Managet, 4/24/2018**

   Interviewed: ☒ at site ☐ at office ☐ by phone Phone Number: Click here to enter text.

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

   Agency: Illinois EPA

   Contact: Paul Lake , Project Manager, 4/24/2018, P: Phone Number

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

   Agency: Click or tap here to enter text.

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

   Agency: Click or tap here to enter text.

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

   Agency: Click or tap here to enter text.

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions:

   Click or tap here to enter text.

4. **Other Interviews (optional):** ☐ Report attached

   Click or tap here to enter text.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

Site Inspection Checklist

1. O&M Documents

☒ O&M manual	☒ Readily available	☒ Up to date	☐ N/A
☒ As-built drawings	☒ Readily available	☐ Up to date	☒ N/A
☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A

Remarks: Click or tap here to enter text.

2. Site-Specific Health and Safety Plan ☒ Readily available

☒ Contingency Plan/Emergency Response Plan ☒ Readily available

Remarks: Click or tap here to enter text.

3. O&M and OSHA Training Records

☐ Readily available ☐ Up to date ☒ N/A

Remarks: Click or tap here to enter text.

4. Permits and Service Agreements

☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
☒ Waste disposal, POTW	☒ Readily available	☒ Up to date	☐ N/A

☐ Other permits: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

5. Gas Generation Records

☐ Readily available ☐ Up to date ☒ N/A

Remarks: Click or tap here to enter text.

6. Settlement Monument Records

☐ Readily available ☐ Up to date ☒ N/A

Remarks: Click or tap here to enter text.

7. Groundwater Monitoring Records

☒ Readily available ☒ Up to date ☐ N/A

Remarks: Click or tap here to enter text.

8. Leachate Extraction Records

☐ Readily available ☐ Up to date ☒ N/A

Remarks: Click or tap here to enter text.

9. Discharge Compliance Records

☐ Air	☐ Readily available	☐ Up to date	☒ N/A
☒Water (effluent)	☒ Readily available	☒ Up to date	☐ N/A

Remarks: Click or tap here to enter text.

10. Daily Access/Security Logs

☐ Readily available ☐ Up to date ☒ N/A

Remarks: The Site is fenced and locked and not normally manned.

IV. O&M COSTS

1. O&M Organization

☐ State in-house ☐ Contractor for State

☐ PRP in-house ☒ Contractor for PRP

☐ Federal Facility in-house ☐ Contractor for Federal Facility

Remarks: Click or tap here to enter text.

2. O&M Cost Records

☐Readily available ☐ Up to date ☐ Funding mechanism/agreement in place

Original O&M cost estimate Click or tap here to enter text. ☐ Breakdown attached

Total annual cost by year for review period if available

From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached

3. Unanticipated or Unusually High O&M Costs During Review Period

Describe costs and reasons:

Click or tap here to enter text.

V. ACCESS AND INSTITUTIONAL CONTROLS

Site Inspection Checklist

	☒ Applicable		☐ N/A
1. Fencing Damaged	☐ Location shown on site map	☒ Gates secured	☐ N/A
Remarks: Site inspection identified 2 locations in fence that need repair along Mississippi River where trees had fallen on the fence			
2. Other Access Restrictions	☐ Location shown on site map	☐ Gates secured	
Remarks: Click or tap here to enter text.			
3. Institutional Controls (ICs)			
A. Implementation and Enforcement			
Site conditions imply ICs not properly implemented	☐ Yes	☐ No	☒ N/A
Site conditions imply ICs not being fully enforced	☐ Yes	☐ No	☒ N/A
Type of monitoring (*e.g.*, self-reporting, drive by)	In accordance with O&M Plan		
Frequency	In accordance with O&M Plan		
Responsible party/agency	Responsible Parties		
Contact: Steve Smith, Title , 4/24/2018, P: 314-674-4660			
Reporting is up-to-date	☒ Yes	☐ No	☐ N/A
Reports are verified by the lead agency	☐ Yes	☐ No	☒ N/A
Specific requirements in deed or decision documents have been met	☒ Yes	☐ No	☐ N/A
Violations have been reported	☐ Yes	☐ No	☒ N/A
Other problems or suggestions:			
Click or tap here to enter text.			
B. Adequacy	☒ ICs are adequate	☐ ICs are inadequate	☐ N/A
Remarks: Click or tap here to enter text.			
4. General			
A. Vandalism/Trespassing	☐ Location shown on site map	☒ No vandalism evident	
Remarks: Click or tap here to enter text.			
B. Land use changes on site	☒ N/A		
Remarks: Click or tap here to enter text.			
C. Land use changes off site	☒ N/A		
Remarks: Click or tap here to enter text.			
VI. GENERAL SITE CONDITIONS			

1. Roads ☒ Applicable ☐ N/A

A. Roads damaged ☐ Location shown on site map ☐ Roads adequate ☐ N/A

Remarks: Click or tap here to enter text.

B. Other Site Conditions

Remarks: Click or tap here to enter text.

VII. LANDFILL COVERS

1. Landfill Surface ☐ Applicable ☒ N/A

A. Settlement (Low Spots) ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Cracks ☐ Location Shown on Site Map ☐ Cracking Not Evident

Lengths: Click or tap here to enter text. Widths: Click or tap here to enter text. Depths: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

D. Holes ☐ Location Shown on Site Map ☐ Holes Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

E. Vegetative Cover ☐ Grass ☐ Cover Properly Established

☐ Tress/Shrubs (indicate size and locations on a diagram ☐ No Signs of Stress

Remarks: Click or tap here to enter text.

F. Alternative Cover (armored rock, concrete, etc.) ☐ N/A

Remarks: Click or tap here to enter text.

G. Bulges ☐ Location Shown on Site Map ☐ Bulges Not Evident

Areal Extent: Click or tap here to enter text. Height: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

H. Wet Areas/Water Damage ☐ Wet Areas/Water Damage Not Evident

☐ Wet Areas ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

☐ Ponding ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

☐ Seeps ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

☐ Soft Subgrade ☐ Location Shown on Site Map Areal Extent: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

I. Slope Instability ☐ Location Shown on Site Map ☐ Slope Instability Not Evident

☐ Slides Areal Extent: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

2. Benches ☐ Applicable ☐ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

A. Flows Bypass Bench ☐ Location Shown on Site Map ☐ N/A or Okay

Remarks: Click or tap here to enter text.

B. Bench Breached ☐ Location Shown on Site Map ☐ N/A or Okay

Remarks: Click or tap here to enter text.

C. Bench Overtopped ☐ Location Shown on Site Map ☐ N/A or Okay

Remarks: Click or tap here to enter text.

3. Letdown Channels ☐ Applicable ☐ N/A

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

A. Settlement ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Material Degradation ☐ Location Shown on Site Map ☐ Degradation Not Evident

Material Type: Click or tap here to enter text. Areal Extent: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

D. Undercutting ☐ Location Shown on Site Map ☐ Undercutting Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

E. Obstructions ☐ Location Shown on Site Map ☐ Undercutting Not Evident

Type: Click or tap here to enter text.

Areal Extent: Click or tap here to enter text. Size: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

F. Excessive Vegetative Growth ☐ Location Shown on Site Map ☐ Excessive Growth Not Evident

Areal Extent: Click or tap here to enter text. ☐ Vegetation in channels does not obstruct flow

Remarks: Click or tap here to enter text.

4. Cover Penetrations ☐ Applicable ☐ N/A

A. Gas Vents ☐ Active ☐ Passive

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

B. Gas Monitoring Probes

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

C. Monitoring Wells

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

D. Leachate Extraction Wells

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

E. Settlement Monuments ☐ Located ☐ Routinely Surveyed ☐ N/A

Remarks: Click or tap here to enter text.

5. Gas Collection and Treatment ☐ Applicable ☐ N/A

A. Gas Treatment Facilities

☐ Flaring ☐ Thermal Destruction ☐ Collection for Reuse

☐ Good condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Gas Collection Wells, Manifolds, and Piping

☐ Good condition ☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

C. Gas Monitoring Facilities (e.g. gas monitoring of adjacent homes or buildings)

☐ Good condition ☐ Needs Maintenance ☐ N/A

Remarks: Click or tap here to enter text.

6. Cover Drainage Layer ☐ Applicable ☐ N/A

A. Outlet Pipes Inspected ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

B. Outlet Rock Inspected ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

7. Detention/Sediment Ponds ☐ Applicable ☐ N/A

A. Siltation ☐ Siltation Not Evident ☐ N/A

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Erosion ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Outlet Works ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

D. Dam ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

8. Retaining Walls	☐ Applicable	☐ N/A

A. Deformations ☐ Location Shown on Site Map ☐ Deformation Not Evident

Horizontal Displacement: Click or tap here to enter text.

Vertical Displacement: Click or tap here to enter text.

Rotational Displacement: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Degradation ☐ Location Shown on Site Map ☐ Deformation Not Evident

Remarks: Click or tap here to enter text.

9. Perimeter Ditches/Off-Site Discharge	☐ Applicable	☐ N/A

A. Siltation ☐ Location Shown on Site Map ☐ Siltation Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Vegetative Growth ☐ Location Shown on Site Map ☐ N/A

☐ Vegetation Does Not Impede Flow

Areal Extent: Click or tap here to enter text. Type: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

D. Discharge Structure ☐ Functioning ☐ N/A

Remarks: Click or tap here to enter text.

VIII. VERTICAL BARRIER WALLS

☒ Applicable	☐ N/A

1. Settlement ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

2. Performance Monitoring Type of Monitoring: Groundwater, Surface water and Sediments

☐ Performance Not Monitored ☐ Evidence of Breaching

Frequency: In accordance with O&M Plan Head Differential: **Varies with river stage**

Remarks: Click or tap here to enter text.

IX. GROUNDWATER/SURFACE WATER REMEDIES

☒ Applicable ☐ N/A

1. Groundwater Extraction Wells, Pumps, and Pipelines ☒ Applicable ☐ N/A

A. Pumps, Wellhead Plumbing, and Electrical ☐ N/A

☒ Good Condition ☐ All Required Wells Properly Operating ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances

☒ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Spare Parts and Equipment ☐ Needs to be Provided

☐ Readily Available ☐ Good Condition ☐ Requires Upgrade

Remarks: Click or tap here to enter text.

2. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A

A. Collection Structures, Pumps, and Electrical

☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances

☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Spare Parts and Equipment ☐ Needs to be Provided

☐ Readily Available ☐ Good Condition ☐ Requires Upgrade

Remarks: Click or tap here to enter text.

3. Treatment System ☐ Applicable ☒ N/A

A. Treatment Train (Check components that apply)

☐ Metals removal ☐ Oil/Water Separation ☐ Bioremediation

☐ Air Stripping ☐ Carbon Absorbers

☐ Filters Click or tap here to enter text.

☐ Additive (e.g. chelation agent, flocculent) Click or tap here to enter text.

☐ Others Click or tap here to enter text.

☐ Good Condition ☐ Needs Maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of groundwater treated annually Click or tap here to enter text.

☐ Quantity of surface water treated annually Click or tap here to enter text.

Remarks: Click or tap here to enter text.

B. Electrical Enclosures and Panels (properly rated and functional)

☐ N/A ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Tanks, Vaults, Storage Vessels ☐ N/A

☐ Proper Secondary Containment ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

D. Discharge Structure and Appurtenances

☐ N/A ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

E. Treatment Building(s)

☐ N/A ☐ Good condition (esp. roof and doorways)

☐ Needs repair ☐ Chemicals and equipment properly stored

Remarks Click or tap here to enter text.

F. Monitoring Wells (Pump and Treatment Remedy) ☐ N/A

☐ Properly secured/locked ☐ Functioning

☐ Routinely sampled ☐ All required wells located

☐ Good condition ☐ Needs Maintenance

Remarks Click or tap here to enter text.

4. Monitoring Data

A. Monitoring Data:

☒ Is Routinely Submitted on Time ☐ Is of Acceptable Quality

B. Monitoring Data Suggests:

☒ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

5. Monitored Natural Attenuation

A. Monitoring Wells (natural attenuation remedy) ☒ N/A

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ All required wells located ☐ Needs Maintenance ☐ Good condition

Remarks: Click or tap here to enter text.

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

1. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).
The objective of the barrier wall is to pump out water naturally going into the barrier wall, for off-site treatment at the local POTW. This is being met. Surface sampling in the Mississippi River has demonstrated that the barrier wall is effectively capturing the groundwater plume.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

The GMCS has a good on-line history.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

None

4. Early Indicators of Potential Remedy Problems

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

None